20: Hart E-5 (195.) 1954 OA1 Philippines
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PLATE V

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Rice agriculture and soils correlate in Barrio Caticugan. The Zamboanguita clay area of the barrio corresponds almost precisely with the rice paddies. An oven-dried chemical analysis of a sample of this clay is given in Table IV.

TABLE IV

pH Value	Total Nitrogen %	Available Constituents in Parts per Million[42]							
		NH_3	NO_3	P	K	Ca	Mg	Mn	Fe
5.90	0.39	2	2	45	47	5300	190	26	1

The Zamboanguita clay of Caticugan's paddies, is high in nitrogen, fairly well supplied with calcium, but low in available phosphorus and potassium, especially the latter.

The remainder of the soils of Caticugan are sandy loams with the exception of areas of Mandawa Loam in small localities of Caticugan and Naga.[43] Along the east bank of the Mantuyop River, parts of the west bank of the Siaton River, and south of the main path from Caticugan to Talo-ot, the loams are quite stony, which hinders

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[42]The chemical analysis was made through the cooperation of Ricardo T. Marfori, Acting Chief, Division of Soil Laboratories, Bureau of Soil Conservation, Manila, and Marcos M. Alicante, Director of Soil Conservation Bureau. The soil sample sent weighed almost four pounds and was composed of 20 separate surface samples taken from different parts of the locality.

[43]Since no profile was taken in the field this classification is tentative.

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influenced the present land use patterns of Negros, the areal distribution of crops today appears to have been influenced more forcefully by physical rather than cultural factors.

Corn-Coconut Regions of Eastern Negros

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The major maize-producing areas in the Philippines are the Visayan Islands of Negros, Cebu, Siquijor, Bohol, Leyte, Masbate and the Cagayan valley (Luzon), and Mindanao.[79] The Philippines is self-sufficient in this grain and it is called the "poor man's rice."[80] For the crop year 1951-52 rice accounted for 42 per cent of all Philippine crops; 18 per cent of the cultivated land was devoted to corn.[81] Corn is the "principal foodstuff of about 30 per cent of the population" of the Philippines.[82]

[177]

The Spaniards first introduced corn in the 16th century; it appeared to have spread rapidly in the Visayas. The two corn-coconut regions of Negros are agricultural phenomena unique in Asia, for here a non-indigenous food crop dominates the agricultural landscape. The adaptability of corn to the physical

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[79] Hainsworth and Moyer, op. cit., p.52.

[80] Hugo H. Miller, Principles of Economics Applied to the Philippines. New York, Ginn and Company, 1932, p.212.

[81] Central Bank of Philippines Statistical Bulletin IV, No. 1 (March 1952). Manila, Bureau of Printing, p.99.

[82] "Philippine Corn Production High," Foreign Crops and Markets, LXV, No. 20 (November 17, 1952), p. 455.

environment made possible the expansion of agricultural frontiers into localities once considered non-agricultural. 311 243.

> Cebu, Bohol, Siquijor, Negros Oriental and other smaller neighboring Visayan islands constitute an outlier from the Western Hemisphere in what is predominately thought of as a rice-producing region. Without maize many of the lands now supporting fairly dense populations...could support only a small fraction of their present-day population at the same standard of living.[83]

Siaton municipality is within one of the two corn-coconut regions of eastern Negros. The Southern Corn-Coconut region, that includes Siaton, is separated from the northern region by the Bais lowland enclave. The total area of this southern region is about 558 square miles of which only 68 square miles (or 12 per cent) are under active cultivation. Of the land cultivated, nearly 46 per cent is devoted to corn or crops raised in association with this grain. Corn and coconuts account for 73 per cent of the total cultivated land. (See Plate XVI.)[1] 311

The predominance of corn over rice in these two regions probably is not due to the Filipinos' preference for the former but to geographic factors such as coral-line limestone soils and a precipitation regime that favor corn production over rice. The Southern Corn-Coconut region is an "area of poorer lands, poorer soils, poorer crops and a lower standard of living for the farmers."[84]

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[83] Wernstedt, op. cit., p. 130.

[84] Wernstedt, op. cit., p. 104.

1 [See p. 105, cat. 311 - Analyst]

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PLATE XVI p. 103

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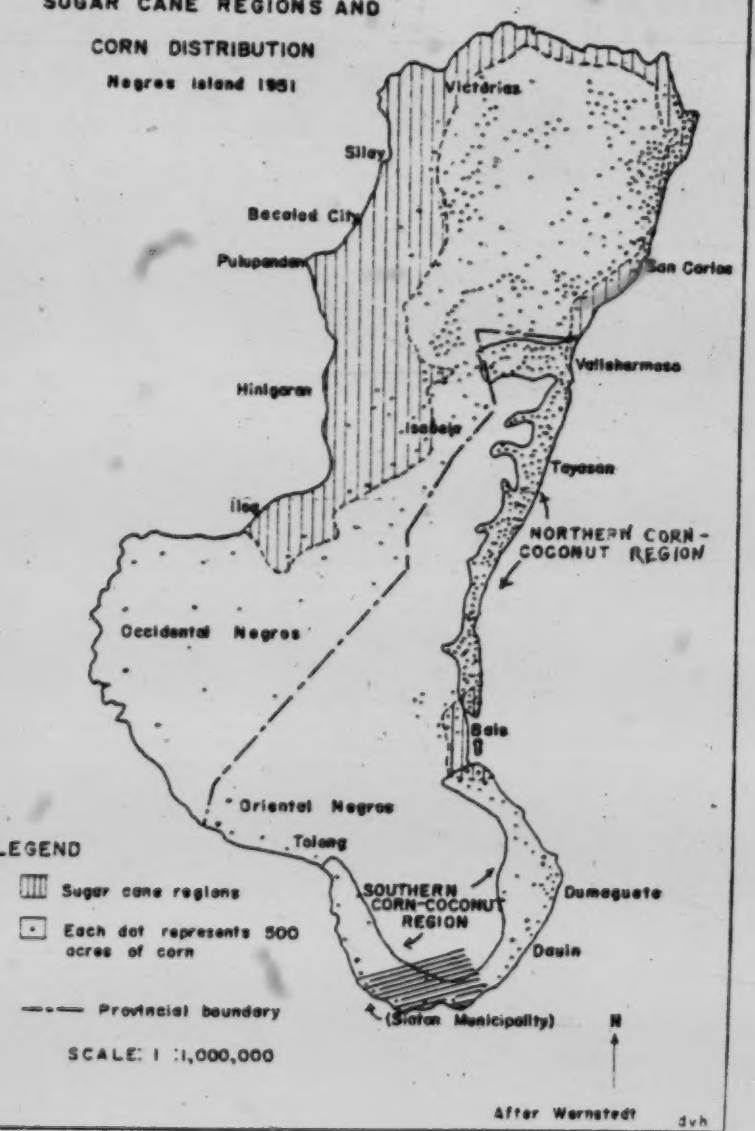

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The Southern Corn-Coconut region is one of the most sparsely settled areas in Negros, with the exception of the Tablas plateau and the Central Mountain range. Dumaguete has over 1,000 persons per square mile while Bacong has between 250 and 499 persons. The remainder of this region has a population density between 100-249 persons per square mile with most of the Filipinos crowded along the narrow littoral. The western and northern parts of this region, reaching back to the Central Mountain range, are even less sparsely inhabited.

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The Southern Corn-Coconut region's cultivated land extends from the southern municipality of Sta. Catalina to Pamplona. From the steep cogon-grass slopes of the Central Mountain range to the coconut-lined beaches, corn fields are the most typical sight. Rice paddies usually occur as isolated patches in a carpet of corn with a coconut fringe.

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Five varieties of corn are grown in the Philippines: pop corn, sweet corn, dent corn, glutinous corn (lagkitan) and flint corn.[86] Flint corn is the most widely grown variety in the Philippines, as a whole, and in the Southern and Northern Corn-Coconut regions. Flint corn is better suited to grinding into meal--the staple food in these two regions.

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[86] Leopoldo B. Uichanco and Francisco M. Sacay, Philippine Agriculture: Field Crops. Manila, College of Agriculture, University of the Philippines, 1949, I, p. 112.

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The corn seasons reflect the precipitation patterns of the Southern Corn-Coconut region. The first corn crop is planted at the start of the rainy season, usually in April or May, depending on the locally available moisture. This crop is harvested at the end of the rainy season, normally from September to November, and about one-half of the land is replanted with a second corn crop.[87] Only a few fields are planted with a third corn crop, because of the lack of moisture in the ground.[88]

Because of different planting periods, the harvests in the southern region are staggered. In Sta. Catalina the first corn may be planted as early as late March while in the northern part of the same region, Amlan, for example, the fields may not be sowed until late May. As a result there are seasonal migrations of barriofolk from one locality to another to help in the harvests. The harvest migrations will be discussed more fully in Chapter IV of the barriofolk of Caticugan.

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[87]Hainsworth and Moyer, op. cit., p.53.

[88]A survey was made in 1948-49 of Barrio Malabo, Valencia municipality, where the third corn crop is planted in November and December. Marcelo V. Arnaldo, "A Study of the Economic and Social Conditions of the Mountain Barrio of Malabo, Valencia (Luzuriaga), Negros Oriental, Philippines." Dumaguete, Negros Oriental, Silliman University, 1949, p.10. Typescript.

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The agricultural techniques of the average southern farmer in growing corn are backward. Tillage is done with shallow plowing equipment and often is neglected. Artificial or natural fertilizers are generally not used, mainly because the farmers lack capital. The distribution of fertilizer, however, by the Mutual Security Agency reached Siaton in 1952. The fields are badly eroded in many localities as a result of careless farming practices. Ideal corn land is slightly rolling with good drainage during the rainy season. Since corn is planted in rows on undulating land, excessive erosion often results. Few farmers attempt to half erosion by terracing or cover-cropping, preferring to permit the land to recuperate by lying fallow for short periods. These agricultural methods are reflected in the average yield of the region, about 8 bushels per acre--40 per cent below the national level of 15 bushels an acre. The average yield per acre in the United States in 1950 was 37.4 bushels. Crops associated with corn are tabios, string-beans, cassava, mungos, and peanuts. Camotes and a variety of fruits, such as mangos, papaya and bananas are also grown. Vegetables are grown either for family consumption or sale, in gardens near the residences.

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Within the Southern Corn-Coconut region Siaton and Zamboanguita municipalities have the largest percentage (23) of cultivated land devoted to rice. Rice is grown mainly for family consumption; very little is

sold. The paddies of the average farmer in Siaton and Zamboanguita are so small that they cannot produce sufficient rice to last the families through the year. About 83 per cent of the cultivated land is also occupied by coconut palms. In Pamplona is one of the largest coconut plantations in Negros; it is owned and managed by Americans. Generally, however, coconut plantings vary from 5 to 15 acres and are owned by Filipinos. Many families have a few coconut trees that provide their chief cash income. Coconut palms usually appear along the littoral where the sandy soils are too well-drained for other crops and the internal drainage from the Central Mountain range favors coconut cultivation. Coconuts, however, are frequently planted along field boundaries and extend toward the interior of many parts of this region.

Coconut palms begin to bear as early as five years after planting and often produce nuts when a century old. The Laguna variety is common in this region; it is an early-bearing tree that usually produces nuts after eight or ten years. The fresh coconut meat is dried under the sun or in crude, smoky ovens, tapahans. The dried meat is known as copra and is the chief export of Dumaguete port; in 1951 it amounted to more than $5,000,000. The prosperity of this region is closely tied to copra prices. When prices are high, for example, enrollment in both public and private schools rises; but when copra prices fall school enrollments decrease

TABLE XII

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Percentage of the Land of Each Municipality Devoted to the Major Crops, 1950-1951 Northern Corn-Coconut Region[89]

Municipality	Corn	Coconuts	Sugar	Rice (a)	Roots	Vegetables	Beans	Fruits
Canlaon (b)	80	*	*	15	2	*	1	*
Vallehermoso	81	8	6	1	1	1	*	*
Guihulngan	89	8	1	*	1	*	*	*
La Libertad	90	6	0	*	1	1	*	*
Jimalalud	80	8	4	3	2	*	*	*
Tayasan	79	8	4	4	2	*	*	*
Ayungon	77	9	*	9	2	*	1	*
Payabon	79	4	1	11	3	*	*	*
Manjuyod (b)	71	7	6	12	2	*	*	*

* Indicates less than 1 per cent
(a) Mostly upland rice
(b) Transitional municipalities

The percentages of land occupied by corn illustrate the dominance of this crop; in fact, nowhere else in the Philippines had corn captured the agricultural landscape so thoroughly as here. Less land devoted to cash crops, such as coconuts, reflects a greater need for food. More than 81 per cent of the cultivated land in this region is occupied by corn, and in some municipalities like La Libertad corn occupies 90 per cent of the farmed area.

Rice Regions of Negros

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Rice is not the dominant crop of Negros as in many parts of the Philippines. Of the total cultivated land in the archipelago 42 per cent is occupied by rice. Only 29 per cent of the total cultivated land of Negros is

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[89] Wernstedt, op. cit., p.128.

devoted to rice. About 12 per cent of the total cultivated land in Negros Oriental is devoted to rice while in Negros Occidental three times this amount (36 per cent) is occupied by rice.

Today Negros imports rice from Panay and Mindanao to feed its people. Spencer states: "The main sugar-producing area of Negros Island [Occidental province] and the whole island of Cebu are the chief deficit regions, with marked food shortages."[90] In the past, however, Negros was a rice surplus area. Miguel de Loarca wrote in the latter part of the 16th century that northern Negros was "rich in foods, such as rice." Legaspi's account of Negros states: "Rice which is the bread, grows in abundance."[91] Negros' shift from a rice surplus to a deficit was largely the result of the great expansion of sugar cane acreage and to the associated increase in population.[92] Negros is capable of raising sufficient rice for its population with improved agricultural practices and increased irrigation.

More than a thousand varieties of rice are grown in the Philippines. Many varieties are old established rices while others have been introduced from the United

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[90] Spencer, op. cit., p.72.

[91] Miguel de Loarca, Blair and Robertson, op. cit., V, p.47.

[92] Wernstedt, op. cit., p.190.

States, Italy, Spain, Iran, and southeast Asia. "About one hundred of the older varieties and four or more of the recent introductions are grown commercially [in the Philippines]."[93] There are four major categories of rice in the Philippines: irrigated lowland; non-irrigated lowland; palagad ("dry season rice"); and upland rice.[94] In Negros 59 per cent of the rice land is occupied by either irrigated or non-irrigated lowland rice.

Most of Negros' irrigated rice land, about 7,000 acres, is located near the coast, normally on river deltas where the waters are easily diverted. Exceptions include the Canlaon plateau where, at an elevation of nearly 1,000 feet, about 2,500 acres of rice land are irrigated by streams which originate on nearby volcanic peaks. Most of the lowland non-irrigated rice land is found along the flood plains. These are areas which cannot be irrigated due to lack of capital or technical difficulty.

Lowland rice usually is planted in Negros between June and August, although the dates vary slightly due to early or late start of the rainy season.[95] Non-irrigated

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[93] Uichanco and Sacay, op. cit., p.2.

[94] Palagad is the second rice crop a farmer tries to raise in one year from a usually, but not necessarily always, irrigated paddy. Cultivation practices have created two subtypes of upland rice agriculture: one where the fields are plowed for planting and the other where the rice is planted with a dibble stick.

[95] Hainsworth and Moyer, op. cit., p.53. These months appear to be the general planting and harvesting dates for rice in the Visayan Islands.

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lowland rice is more dependent on the southwest monsoon than is irrigated rice. There are several good size Negros rice haciendas located at Sipalay, Kabankalan, and Himamaylan, where some mechanized equipment is used. The majority of the paddies, however, are planted by farmers who use wooden plows, carabaos, and the labor of their families. Since the planting of rice in Siaton appears to be quite similar to practices for Negros as a whole, the detailed discussion of this subject will be deferred until Chapter IV.

Macan-Pina and Apostol, early maturing rice varieties, are most common in northern Negros in order to secure a palagad crop after the first rice harvest. Calawa, Remined #3, and Aposta, medium-maturing rices, are most popular in the central plains of Negros Occidental while in southwestern Negros late-maturing varieties like Seraup-Besar and Klon-Klon are favored. The growing season of the rice planted in Negros varies; the early-maturing rice variety takes about 135 to 165 days to mature, the medium-maturing, from 170 to 190 days, while the late-maturing from 190 to 200 or more days after transplanting. Harvest of the first rice in Negros begins in October or November. The palagad crop is usually planted between December and January and harvested in March and April.[96]

[96]Only a few hundred acres of palagad are grown in Negros, mainly in the municipalities of Bago and Canayan. Cotsian and Klon-Klon are the two most common rices planted; they yield about 17 bushels per acre.

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Upland rice occupies 27 per cent of the total land devoted to rice in Negros. Several fairly large upland rice haciendas are located in Silay, Talisay, Bago and Bacolod municipalities. The most frequently planted rice varieties in plowed upland localities are Magsanaya, Lubang, Guinatus, and Cotsian. However, most rice is grown on the small holdings of individual farmers. Nearly all of the rice planted in caingins is grown in the Central Mountain range or its piedmont areas. In Siaton, as elsewhere, many of the lowland barriofolk have small caingins in the nearby hills.

About 89 per cent of the total rice land in the island is located in Negros Occidental; of this 80 per cent occurs in the western coastal lowland rice region. This region includes the municipalities which border the western coast of Negros, from Saravia to Cauayan, with the five nearby municipalities of Murcia, La Carlota, La Castellana, Magallon, and Isabela. Wernstedt estimates that about 67 per cent of Negros' total upland rice is grown in this dominant rice region.

The six most common lowland rice varieties in this western coastal rice region are Raminad #3, Calawa, Aposta, Seraup-Besar, Elon-Elon, and Khao Bai Sri. The average yields vary from 29 bushels per acre in the northern half of the region (from Saravia southward to Pulupandan) to 33 bushels per acre in the southern portion. The yield of upland rice is about five bushels

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less per acre than lowland rice. Most of the rice in this western region is grown by tenant farmers on small holdings.

While most of the rice of Negros is grown in the western province, there are many small rice-producing areas in the island located on small riverine plains. These areas are relatively isolated and have become self-sufficient farming centers with most of the rice grown consumed in the area. Sipalay and Asia are examples of such rice-producing riverine plains; they have approximately 11,000 acres of lowland rice.

Tolong is known as the "Rice Bowl of Southern Negros." In 1952 this municipality planted about 11,000 acres in rice.[97] The Tolong lowland extends from the Sicopon to the Bayawan rivers; the local agriculture agent reports that it contains more than one-half of the municipality's rice acreage. Extensions of this lowland to the northeast, known locally as Taboan and Lopay, were opened for farming six or seven years ago and are said to be promising new agricultural regions. The two most common rice varieties planted in Tolong are Macan and Lubang (or Lubang Puti). Lubang Puti (Puti means "red") is widely grown in southern Negros and parts of Siquijor, being a versatile rice which can be planted in lowland as well as upland and also for palagad.

97"Production Data by Municipalities. Crop Year from July 1, 1951 to June 30, 1952." Dumaguete, Negros Oriental, Provincial Agriculture Office. Typescript.

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The yield ranges from 24 to 30 cavans of palay per hectare.[98]

Small rice-producing regions of Negros Oriental are such localities as Canaway (Siaton), Mayabon (southwestern Zamboanguita municipality), the Tanjay River area in Bais and Tanjay. These regions have from several hundred to two or three thousand acres of rice land. For most of the people of Negros Oriental, rice is a luxury food. Only the better-to-do eat rice daily; the average barriofolk eat rice only for a month or two during the year and on festive occasions. Very little rice grown in these areas enters the commercial trade of Negros.

P 249 .3 H33

Sugar Regions of Negros

Before World War II sugar was the most important export crop of the Philippines. Approximately three-fourths of the crop was sold to the United States. In 1951-52 the Philippines supplied almost 3 per cent of the total sugar cane crop of the world. Since the war copra has outranked sugar as the principal cash crop due to the widespread wartime destruction of sugar extracting and refining facilities. Sugar cane cultivation was a pre-Spanish activity in the Philippines, when Chinese merchants exported sugar to China. By the end of the

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[98] One cavan of palay (unhusked rice) equals 44 kilos or 97 pounds while a cavan of clean rice equals 57.5 kilos or 127 pounds. A hectare is 2.47 acres.

or two-fifths of all we dig and slice. The caingin owners are busy then making a new caingin, this is why they are glad to see us. It is as if we had planted our own cassava. We live there and help make slices. Some of the people bring their own food and others get food from the caingin owners. We live in their houses.

Last year my wife went to Dodong's field in Padang. Mostly women went because it was during the plowing season. It was March. I did not go, just my wife. Our share was four sacks of mixed dried cassava and camotes chips. People in Padang live differently than the people in Naga. In the mountains one can plant many things. Here we just plow in season. In the mountains one can plant red squash, gabi, pesula [a variety of squash] sikwa [commonly called patola: Luffa acutangula Linn.]. There are no big houses in the mountains. They are not permanent because after three years the caingin owners have to look for another place to caingin.

Women and children are usually the ones that go to the mountains to harvest the caingins. I was told by some informants that "men would be olao [ashamed or embarrassed] to harvest rice in someone else's caingin. The people would say they did not know how to make their own caingin." However, some men do go, particularly the unmarried men (olitaos) who are said to "follow the dalagas [unmarried] young women." This is an interesting comment; for a young man courts a girl in the barrio under many handicaps. To be able to work and talk with her, away from the surveillance of the family, would have many advantages.[14]

Rice is cut one stalk at the time with a small knife. Rice heads are put into small baskets strapped to the harvester's side; later they are emptied into larger baskets. Rice is threshed and corn is harvested by the

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[14]I never observed a caingin corn or rice harvest,

same methods used in the lowlands. The harvesters normally get one-fourth, sometimes, but rarely, one-third of the rice harvested. 243

A very limited survey, so restricted in nature as to be merely suggestive, was made of seven caingins. The average corn yield per acre of these caingins was five bushels.[15] This figure is for the first corn harvest that usually yields more than the second crop. Three of the seven caingins were damaged by wild pigs and monkeys, suggesting the problem these pests present to the farmers. Dong-go was planted in all the caingins except two which grew Bagsiao. The caingins were located in sitios Kangotot and Nawakat (Casala-an), Casala-an, Dolog, and Bantolinao and Sitio Banat-e (Maloh). 241 311 433

15The conversion was: one cavan of shelled corn equals 58 kilos and 1 kilo equals 2.2 pounds. One bushel of ear corn (not shelled corn) equals 52 pounds. To determine the size of caingin or lowland corn fields the following method, recommended by the provincial agricultural office, was used: "With reference to your letter...regarding rate of planting corn, please be informed that the rate varies according to the number of grains dropped per hill and the distance of planting corn. We noted that if the distance of planting is 80 x 80 cm. dropping 4-5 grains per hill the rate of planting is around 6 gantas per hectare, especially if the grains of corn used are small. By dropping only three grains per hill at a distance of 1 M. x 80 cm., especially if the grains are big, the rate of planting per hectare of corn is only around four gantas. But by dropping three grains per hill at a distance of 1 meter by 1 meter, if the grains are medium size, the rate of planting is only five gantas per hectare. So on the average we use five gantas per hectare as the rate of seeding corn regardless of the size of the grains and the distance of planting and the rate of planting per hill..." Personal communication to writer from Provincial Agricultural Supervisor, February, 1951, Dumaguete, Negros Oriental. [804]

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LOWLAND RICE

Introduction

When the Spaniards first visited Negros in the middle of the 16th century Filipinos were cultivating rice. Probably rice had been brought to the Philippines by nameless wanderers from Indo-China or south China in the late Neolithic period. The distribution of lowland rice in Negros and Siaton municipality has been described. As one travels up the Siaton River valley, the cultivation of lowland rice disappears north of Barrio Sandolot where there are only a few pilapils (rice paddies).

The Agricultural Calendar (pages 273, 274, 275, and 276)[1] does not present a sharp picture of farming activities. Table XV presents a more detailed account of the planting and harvesting of rice and corn, the two major crops of Caticugan

TABLE XV

AGRICULTURAL CALENDAR FOR RICE AND CORN
CATICUGAN, 1951

CROP	PLANTING BEGAN	PLANTING FINISHED	TRANSPLANTING BEGAN	TRANSPLANTING FINISHED
	Rice Seed Beds			
Lowland rice	June 19	July 14	August 22	September 26

1 [Category 116 -- Analyst]

TABLE XV (cont.)

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CORN	PLANTING BEGAN	PLANTING FINISHED	HARVEST BEGAN	HARVEST FINISHED
First irrigated corn	March 7	April 23	May 28	July 9
Second irrigated corn	June 19	June 25	August 27	September 2
First dry corn	April 27	May 12	August 4	August 29
Second dry corn	October 5	November 23	See Footnote 23	See Footnote 23

The most popular rice variety planted in Siaton is 243
Macan Sta. Rosa.

> The Macan Sta. Rosa is grown on a large scale in Nueva Ecija and Bulacan [provinces in Luzon]. It matures in about 180 days, giving an average production of about 60 cavans per hectare [or 24 cavans an acre]. It turns out a first-class rice of good eating quality.[24]

Records of the provincial agricultural office in Dumaguete 243
show that more than 75 per cent of the total acreage de- 311
voted to lowland rice in Siaton municipality is planted with Macan Sta. Rosa.

Table XVI[1] gives the varieties and acreage of lowland and upland rice planted in Siaton municipality in 1951, according to the Provincial Agriculture Office of Dumaguete.

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[23]The exact dates for the rice and the second non-irrigated corn harvests are not given since I arrived after the former was nearly finished and I left before the latter began.

[24]Uichanco, op. cit., I, p. 4.

1 [See p. 302, cat 245 or 311-- Analyst]

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TABLE XVI

VARIETIES AND ACREAGE OF LOWLAND AND UPLAND RICE PLANTED IN SIATON MUNICIPALITY, 1950

RICE VARIETIES	ACRES
Lowland	
Macan Sta. Rosa	650
Kinamayon	5
Apostol	42
Careret (local variety)	148
	845 total
Upland	
Tinogbong	289
Magsanaya	7
	296 total

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The section on gaingin agriculture indicates that a number of rice varieties planted in Siaton municipality are unknown to the provincial agriculture office, at least in 1950. However, the variety of rice most commonly planted in the gaingins, according to my informants, is Tinogbong.

None of the Caticugan farmers planted Kinamayon, Apostol or Careret rice; nearly all of them planted Macan Sta. Rosa. A few farmers planted glutinous rice varieties (pilit is the common name) called Bodbodron and Kilikot. An early maturing variety, Pinili-an, was planted only in Sitio Dangola; some Minis, an aromatic variety that matures in 185 days, was planted in Dolog.[25] The land

[25] Uichanco and Sacay, op. cit., I, p. 12.

devoted to upland and lowland rice in Siaton increased The land from 1,141 acres in 1950 to 1,260 acres in 1952. 243 [311]

Preparing and Planting the (Sabods) Rice Seed Beds 243

There are certain soil requirements for the rice seed beds. A sandy loam is preferred by the farmers. Soils with large amounts of clay are undesirable since they make it difficult to pull seedlings without damage. The seed bed should not be rocky and is best located where there is no danger of flooding in case of heavy rains. If excessive water collects in seed bed the rice rots.

Once the seed bed is selected the ground is plowed and harrowed until the soil is quite fine. Several informants said the bed is plowed and harrowed four times but this is not always done. Large clods and stones are removed by hand and the seed is sown broadcast. Some farmers, however, make small furrows with a small pointed stick and plant the seeds in furrows, a method called tudlis. The bed is fenced to keep out farmyard animals. Soil preparation and fence construction are done by men and young boys; usually the women plant the seed.

One seed bed was made in a corner of an irrigated field of growing corn in Barrio Caticugan. The lower leaves had been stripped from the corn so the seedlings could get more sunlight. These seedlings had been planted thus because the farmer had a paddy in Sitio Balsa where rice is transplanted earlier than in Caticugan.

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There were no rice seed beds in Naga; the people said the soil is less suitable for seed beds than in Barrio Caticugan. They planted their seeds in Barrio Caticugan and carried the seedlings to Naga for transplanting. Often a farmer has his seed bed in his barrio where he can watch it and later carries the seedlings to his paddy in another near-by barrio.

A number of lihis are associated with the planting and protection of rice seed beds.[26] Of the two major categories of magic, imitative (homeopathic) and contagious, the former is overwhelmingly the more important among the barriofolk of Caticugan. The most common seed bed lihi is to bury a few leaves of a particular plant or tree in the east corner of the bed. None of the people was able to explain why the east corner was usually selected. The leaves of tubli (Derris elliptica (Roxb.) Benth.) and malagpos (Homonoia riparia Lour.) are most

[26] A number of words are used by the barriofolk for the associated practices connected with agriculture; common agreement on these terms does not always occur. Those ceremonies that purport to protect one from unseen spirits, held just before cutting or burning a caingin, and that have nothing directly to do with the crops, are referred often as diwata (literally "superstition"), magbuhat, buhatan, magbutang and premicias. Those rites made before planting or harvesting crops, to ensure a good harvest, protect the seeds or plants, for better tasting crops, or to magically increase the harvest, are called lihis. One informant said: "There are all sorts of lihis that are made for the good of the crops." However, these formal definitions are not always used by all the barriofolk. I have retained their usage whenever the term was frequently employed in reference to a particular practice.

widely used. Other plants that may be employed are tanlad or "Lemon grass" (Andropogon citratus), busikad (Kyllinga monocephala Roth.) bila-bila (Eleusine indica (Linn.) Gaertn), and a thorny species of bamboo called bagakay (Schizostachyum lima Blanco). Sometimes a small piece of malapgos or bagakay is also stuck in the seed bed. The seed bed may be planted with rice that was blessed at the poblacion church during Holy Week.

PLATE XXII

MALAPGOS

The purpose of the tubli is to kill any insects that might damage the seeds or seedlings. Since tubli is also used as a fish poison the imitative magic principle is apparent. Malapgos is to encourage the rice to have full heads when mature. (See Plate XXII.) The malapgos' beady heads are believed to produce similar many-grained rice

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heads. Tanlad, a low-growing plant with many sword-like leaves, is said to produce rice seedlings with many branches with additional heads of grain. The thorny bagakay bamboo and other plants listed are believed to prevent the insects from eating the tender rice seedlings. With very few exceptions these practices are done by the women.

Sometimes the young rice seedlings are invaded by the dogwa worm that eats the seedlings' roots and kills them. To exterminate these worms the lalong fish (Zebra or Scorpion fish), is caught and three of its thorns obtained.[27] Each thorn is then stuck through a worm and the three thorn-pierced worms are placed in the middle of the seed bed. This method is reported by the barriofolk to be very effective.

The writer observed no method of selecting rice for sowing in the seed bed. Often the farmer purchases seed palay in the poblacion since his family has eaten the rice harvested from his field. Others save some seed from the last harvest.

There is no set period for which the seedlings are permitted to grow in the seed bed. Six or seven weeks are considered sufficient. However, if the rains come a little

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[27] Albert W. Herre and Agustin F. Umali, English and Local Common Names of Philippine Fishes. Circular No. 14. Washington, D.C., U.S. Department of Interior, Government Printing Office, 1948, p. 117.

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early the seedlings may be transplanted early and if the rains are delayed the seedlings are permitted to grow longer than usual. When the seedlings are pulled for transplanting if they are too tall their tops are trimmed with a bolo.

Preparing the Rice Paddy (Pilapil) and Transplanting

Rice seedlings are usually transplanted in Caticugan in August and September at the peak of the rainy season. An "expert" can pull seedlings with both hands at the same time, although most people use only one hand. A small bunch of seedlings is pulled, perhaps five to ten per bunch, and the dirt shaken from their roots to make it easier to carry them to the paddies. The seedlings, often tied in small bunches, are carried to the fields in baskets. Pulling of the seedlings is done mostly by women and older children since the men are busy putting the last touches on the paddies. Paddies normally are fully prepared just before transplanting. If they are harrowed and leveled the day before transplanting the soil might become too dry before the seedlings are planted. [462]

Preparation of the paddies is a time-consuming task. Usually they have been plowed once before the heavy rains so that the soil will absorb water more fully. The low dykes built around the paddies may be repaired to prevent leakage, although the dykes in Caticugan are so low and well-packed (they are often used as paths) that their repair is a minor task.

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After the paddies have been plowed and harrowed several times, until the soil looks and feels like soft fudge, they are "ironed" (oteo), i.e., leveled. This is done by turning the harrow upside down and pulling it across the paddy; now the paddy is ready to be planted. A lihi is performed by the women before the seedlings are transplanted. Since the transplanted seedlings are subject to almost the same dangers, this lihi is the same as that described for the seed bed.

Bunches of rice seedlings are scattered over the paddies, and the planters wade into the mud and transplant the seedlings with a motion similar to the dealing of cards. One holds a bunch of seedlings in his left hand and sticks them into the mud with the right hand. The number of seedlings planted at one time is estimated at from three to six seedlings per handful. The seedlings are planted about a handspan (dangao) apart. Some informants said seedlings transplanted east of the main canal are planted four fingers (dapal) apart while those planted on the west side are spaced one hand apart. This difference in spacing is because the more fertile soil west of the main canal produces fuller rice stalks.

Normally the planters begin at one end of the paddy and slowly retreat across the field in order not to cross planted areas. Custom does not prescribe beginning in one specific part of the paddy. When one runs out of seedlings he picks up one of the bunches scattered over the paddy. If the paddy is large or the number of

planters small, only part of the field is prepared for immediate transplanting. Sometimes several days are taken to transplant one paddy. A group may be transplanting in part of the paddy while in another part a man is harrowing or leveling the soil. 243

Transplanting is done by both sexes. Men transplant rice more noticeably than they plant corn. One reason is the back-breaking work of transplanting seedlings. If all the seedlings are not planted the same day, they are put in water and placed in the shade. 243 462

Cooperative transplanting groups are very rare in Caticugan. None was observed during my residence. It is considered cheaper today to pay one's helpers than to prepare and furnish the food and drink necessary for cooperative labor groups. Hired planters are paid fifty cents a day and given their breakfast and lunch. The few people who hired laborers to help transplant paddies in Caticugan were owners who lived in the poblacion. 243 476 [465]

Transplanting time is not a festive period it is said to be in some parts of the Philippines. In Caticugan there were no songs and music. A Philippine school song aptly describes the transplanting in Caticugan. 243

> Planting rice is never fun.
> Bent from morn till the set of sun.
> Cannot stand and cannot sit
> Cannot rest for a little bit[28]

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[28]Ortigas, Jr., op. cit., p. 1.

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The entire community is active at this time. School attendance drops sharply during the transplanting season, for the children must help. The paddies are dotted with busy men, women and children; the women wrap their heads with cloths for protection against the hot sun. Young children scurry across the paddies carrying baskets full of seedlings. The chocolate-colored paddies soon change to a pale green over which later the maya birds swoop in squadron-like maneuvers.

Although in 1951 transplanting activities in Caticugan continued for more than a month, they began abruptly. The barriofolk wait for someone else to begin; when the first farmer starts to transplant all the others follow his lead. They believe it is best for all to transplant at the same time so that the damage to the paddies by insects and birds will be distributed equally. If a person planted his paddy several weeks earlier than the rest, his rice would be growing when the other paddies were bare or only newly transplanted. Insects and birds would concentrate on his paddies instead of having such damage spread evenly among all the paddies. [183]

This attitude is one reason why the Macan Sta. Rosa variety is planted so widely. The people of Barrio Caticugan do not like to interplant with Macan Sta. Rosa earlier maturing varieties. In the past older residents of Barrio Caticugan said many rice varieties with different maturity

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schedules were planted--Kilikot, Perakat and Elon-Elon.[29] However, the different varieties were transplanted so they mature at approximately the same time. Several years ago a few farmers planted Pinili-an (the variety grown in Dangola) in Barrio Caticugan. The Pinili-an harvest was largely destroyed by insects and birds that were most abundant during the ripening of Pinili-an when the Macan Sta. Rosa was still immature. This incident was cited as an example of what happens when early- and late-maturing rice varieites are interplanted in the same locality.

The paddies were weeded once after the seedlings were transplanted. After the first weeding the rice is tall and thick, controlling the spread of weeds. Some paddies may be flooded with water from the canals to drown the weeds. Most of the paddies east of the main canal, however, cannot be irrigated due to elevation of the land. However, flooding usually is unnecessary since the dykes retain the rain. After the first weeding rice requires little care until harvest.

Transplanting in Barrio Caticugan started August 22 when Timoteo Ege, the largest landowner, and his few tenants began to plant his paddies. Once Ege started transplanting, nearly everyone followed. By September 8 Dangola's paddies had been transplanted; about two weeks

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[29] Uichanco and Sacay, op. cit., I, p. 7. Elon-Elon is a late-maturing variety that matures in about 192 days; no references to Kilikot or Perakat were found in this volume.

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later all of Caticugan's rice land was planted. While extending over more than a month, transplanting did not continue every day; after the first rush there was a lull. Some paddies became too dry so the farmers waited for more rain. It rained September 3; the next day, in a light drizzle, transplanting resumed and continued until most of the paddies were planted. The few remaining paddies were transplanted during the next two weeks.

The tiyangao (Leptocorisa acuta, Thurnberg) does considerable damage to rice grown in Caticugan. The insect is said to "suck out the sweetness" (i.e., eats) of immature rice, particularly during noon when the rice heads are open. One method of control is to burn banga tree leaves in the paddy. Burnt banga leaves have a most disagreeable odor--"like burnt food"--and the smoke is supposed to repel the tiyangao. Others get a variety of jellyfish, lapalapa, put them inside a bamboo and place it in the paddy. The foul odor of decaying jellyfish allegedly drives the insects from the rice. If lapalapa are unavailable, a halo lizard may be substituted. Magahats take leaves with an itchy pollen and dust their rice to kill the tiyangao.

Rice Harvest and Associated Practices

Caticugan's lowland rice harvest usually occurs between December and February, except in Dangola where the earlier maturing Pinili-an is harvested in November and December. The rice harvest in Negros generally begins

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in October and November and is often finished before the paddies in Caticugan are harvested.

When the rice is ripening another lihi is practiced by some of the Caticugan barriofolk. A handful of stalks is gathered from the paddy and the rice is roasted. Sometimes six red peppers and a piece of ginger are roasted with the rice; others mix these items with the roasted rice later. The mixture is pounded in a mortar; the chaff is not separated from the rice and the whole is wrapped in a leaf of the binonga tree and placed in the middle of the paddy. The lihi purposes are: (1) roasting the rice makes the unharvested rice ripen more quickly while (2) hot peppers and ginger allegedly prevent insects from eating the rice heads. One woman said she put the stalks from the rice used in this ceremony in the rafters of the house. A man told the writer that it was best to add a yellowish piece of banana stalk so the grains would become a similar color.

One man in Barrio Caticugan was reported (but was never seen doing it) to buy firecrackers from the Chinese stores in the poblacion and explode them in his paddy before harvest time to frighten away birds and insects.

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The most widely practiced pre-harvest lihi in Caticugan bears the imprint of Catholicism. Just before the rice is harvested four small crosses are placed in each corner of the paddy. The crosses are usually made of bamboo but one informant said they should be made from the salngan tree for rice harvests, and from the common

thornless bamboo (Kawayan) for the corn dulot. To these crosses are attached bits of Bendita palm blessed during Palm Sunday in the poblacion church and a few rice stalks and heads from the paddy to be harvested. One cross is partly pushed into the earth while the Lord's Prayer is recited by the woman holding the lihi. This woman is often the wife of the owner of the paddy or of a tenant farmer. When this prayer is finished the cross is pushed farther into the ground and a prayer is said to the Virgin Mary. Responses to this prayer are given by the women who accompany the leader. After the two prayers are finished the groups cross themselves. Each time upon completing a prayer, the cross is pushed deeper into the earth. These two prayers are repeated three times (ideally) for each cross. Then the group proceeds counter-clockwise around the paddy; the ceremonies are repeated at the remaining three crosses. Some women recite the Apostle's Creed instead of the Lord's Prayer.

This lihi is nearly always done by women. One man said he often performed his own pre-harvest rice lihi but "my daughter loves to make it." One reason why the men do not perform this lihi is that most of them have not memorized the necessary prayers. Another factor which explains the predominant role of women in these agricultural ceremonies was given by one woman who bluntly stated: "When the rice is ready for harvest the men do not care anymore." The general male indifference and lack of participation in these agricultural practices in Caticugan reflects indifference to the religious affairs in general.

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The crosses are collected after the paddy has been harvested. Often one could see them in the tangkol (storehouse) or homes stuck into the wall until the next harvest. There is nothing sacred about these crosses; they are kept merely to save the trouble of making new ones next year. In Negros Occidental crosses are often put on the tops of the rice stacks--a custom never observed in Negros Oriental. [171]

This type of lihi is not limited to Caticugan or Negros. Lagrimas wrote in 1915 that when the rice is harvested in Samar the owner may request an old woman known as a "skilled harvest beginner" to start the harvest by going into the middle of the field and offering prayers to God and the harvest spirits.[30] To the best of my knowledge the prayers in Caticugan for this pre-harvest rice lihi are not addressed to the unseen spirits. However, it seems quite probable that the lihi originally was made to these unseen spirits as is done in the caingin rice loto. The conversion of the people to Catholicism led them to readdress their prayers to a new god and a new host of saints.

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Echauz describes a pre-harvest rice ceremony held by nominally Catholic inhabitants of Negros. Their ceremony, quite similar to the caingin loto, reflects pre-Spanish beliefs more purely than does the lowland rice harvest lihi of Caticugan. One might suggest that the

[30] Lagrimas, op. cit., p. 9.

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loto approximates the original form of this agricultural practice. The ceremony noted by Lagrimas may be one in which pagan and Christian beliefs are intermixed while the Caticugan lihi may be a final reinterpretation or modification.

Echauz writes that the night before the main harvest an owner would harvest seven gantas of rice from his paddy. Bayibayi--cooked new rice pounded and mixed with sugar and coconut--and Pilipig were made and then mixed and repounded into a mash. To this mixture was added ubas which appears to have been a roasted green rice concoction. The babaylan (priest) who had been engaged by the cultivator made a fire in the cultivator's house and screaming and "foaming at the mouth," he prayed to the unseen spirits. The next morning the babaylan and the paddy owner went to the field to be harvested and distributed the mash along the boundaries, requesting the unseen spirits to dine and to make the harvest plentiful. It was believed that anyone who ate any of this "food for the gods" would fall ill.[31]

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Caticugan rice is harvested by cutting a number of stalks at the time with the sangot, a small semi-circular bladed knife. The cut stalks are laid in piles on the paddy to dry; it takes only several days before the rice

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[31]Echauz, op. cit., pp. 50-1.

20: Hart E-6 (.95.) 1954 OAI Philippines
Central Bisayan OA/4

is sufficiently dried to be threshed. Rice harvesting is everyone's job. Wernstedt reports that in Negros men, women and children harvest the rice. One person can harvest about one cavan of palay per day; an acre producing twelve cavans, the average yield for Negros, requires twelve man-days to harvest.[32]

Caticugan's rice harvest attracts harvesters from as far as Zamboanguita and Dauin, although most of them live in neighboring barrios or sitios. Harvesters are paid according to the speed with which they work. Some cultivators may give their laborers one-seventh of the palay harvested, especially if they are in a hurry to have their paddies harvested and wish to attract help. Harvesters from other barrios who stay several days at one field furnish their own food. The common division of palay in Caticugan, however, is one ganta to the laborer for every eight harvested and threshed. The division is usually made at the end of each day's work.

This harvest practice in Caticugan seems to have developed during the last war when the people harvested their palay rapidly to avoid expropriation by Japanese patrols or guerrillas. For this reason division was made at the end of each day. The usual pre-war practice was to dry palay, put it in one large pile, and thresh all the grain at a later date. The common payment to harvest help was two gantas of rice for every day a man worked at

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[32] Wernstedt, op. cit., p. 199.

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harvesting and threshing the rice, plus meals. Some, but not many, barriofolk still cling to this pre-war practice. Rising costs of food may be another reason for discontinuing the former method of harvesting rice in Caticugan.

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To thresh the palay a large buri mat, often especially made for the job, is placed on the ground. A rough shelter of palm leaves usually is built over the mat to protect the threshers from the sun. A horizontal pole connects the two vertical poles that support the roof. The rice heads are then placed on the mat and the people rub them between their bare feet while grasping the horizontal pole for support. This is the common method of threshing rice in southern Negros. In Negros Occidental, the rice is usually threshed on a platform raised five to ten feet above the ground. The palay falls through the slatted floor of the platform to mats below. If a wind is blowing the palay is winnowed simultaneously.

The palay is gathered and winnowed in flat baskets to eliminate loose straw. The rice is then carried to the house and stored in large buri bags. There are not many separate storehouses in Caticugan; palay and unhusked or shelled corn, usually are stored in the houses. Rice stalks are fed to animals, often by merely turning horses and carabaos loose in the paddies. No other fertilizer is put on the paddies during my period of residence.

In the past the cut rice stalks in Caticugan were piled into stacks (tumpils). A mat of dried rice straw or coconut leaves was made on the ground with a tree

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stump in the center. Bunches of rice stalks, about two handfuls, were slightly leaned against the base of the stump. The stump was encircled in this manner with "rings" of rice. One "ring" or layer was placed over another and stacks six or seven feet high were made. No rice stacks were seen in Caticugan in 1951. The barrio-folk said tumpils were only memories of the past when the rice harvests were more abundant. I did see rice stacks built around a center bamboo upright in other parts of southern Negros.

Paddy Sizes and Yields in Caticugan and Environs

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While municipal land records were studied, a personal survey was made in Caticugan to check the figures obtained from these records as to size of paddies, also to get additional data on yield, residence of owners and tenancy rates.[33] Few farmers know the acreage of their fields. The method of determining field sizes has already been described. I had mimeographed forms made of the land records and

[33] Rural land records in the Philippines are not noted for reliability; this is true for other Asian countries such as Japan. Vide Richard K. Beardsley's review of The Japanese Village in Transition, in Pacific Affairs, XXIV, No. 4 (December, 1951), pp. 428-30. There have been no cadastral surveys in Siaton municipality. Recently the land records of Negros Oriental were rechecked to improve their accuracy. However, the "inspectors" are said to have been the local supporters of provincial politicos and the program occurred suspiciously close to an election.

transferred the data from these records to my forms. All land records for the barrios in the Siaton River valley were copied.

I interviewed about fifty families--about 40 per cent of the families resident in Caticugan. Of course, not all of the people living in Caticugan own or till paddies. Of the families interviewed, figures were obtained for twenty-six individual paddies from twenty families; other families did not cultivate any paddies. Six of these paddies were located outside Caticugan so they were eliminated. Of the twenty paddies, totaling nearly 25 acres, all were planted with Macan Sta. Rosa except one farmer who had interplanted a glutinous variety.

Another survey was made of lowland rice paddy sizes and yields in Sandolot and Datag to obtain comparative data. Seventeen families living in Datag and fourteen in Sandolot were interviewed. Their paddies, totaling 61 acres, were all planted with Macan Sta. Rosa, except one paddy planted with Lubang. According to the municipal land records the average size of the rice fields in Caticugan is .99 of an acre while my survey arrived at the figure of 1.1 acres. The average peddy in Sandolot-Datag was slightly larger--1.6 acres. In 1952 Siaton's average rice yield per acre was 891 pounds; for Caticugan, according to my survey, the yield was only 553 pounds per acre. The Sandolot-Datag average rice yield was lower than in Caticugan; 337 pounds per acre. These figures support the opinion that of all the rice fields seen in the Siaton

River valley, Caticugan's paddies looked the best. There is little doubt in my mind that the rice yield per acre for Siaton municipality in 1952, as estimated by the local agricultural agent, was too liberal. For example, the average rice yield in 1952 for the southern municipalities of Negros (Valencia to Tolong) was 774 pounds per acre.[34]

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According to Siaton's municipal land records, 122 acres of land are planted with lowland rice in Caticugan. This acreage is owned by 136 different individuals of whom 49 per cent live in Caticugan. Of the remaining owners 16 per cent live in Siaton poblacion, 10 per cent in Mantuyop, 8 per cent in Sandolot, and 6 per cent in Datag with several owners living in Inalad, Salag, and Maloh. More than half of the owners of ricefields in Caticugan do not live in the barrio, although they cannot be called absentee landlords in the strict sense. Many of these owners cultivate fields in Caticugan, bringing their plants from seed beds in their barrios.

243 311 423 427

While the records indicate that the 122 acres of paddy in Caticugan are owned by 136 different individuals, the actual number of owners is much larger. Many a paddy is owned jointly by brothers and sisters. Sometimes the land records indicate this fact by stating that

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[34] These figures were obtained from an unpublished report of the Provincial Agricultural Office, Dumaguete, Negros Oriental, 1952.

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the land is owned by the person listed and his or her "heirs" or "brothers." For example, one paddy in Caticugan, inherited on the death of a parent, is owned jointly by seven brothers and sisters. The land records often do not indicate these facts of ownership because the land continues to be registered under the name of an owner dead many years. Heirs often fail to change the land registration records at the municipio due to the small fee charged for the service.

Of the individuals interviewed during the survey in Caticugan, 50 per cent owned their ricefields, 37 per cent were tenants and 13 per cent owned some paddy and tilled others as tenants. In Sandolot-Datag area, of the thirty-one families interviewed, 74 per cent owned their ~~paddies while 26 per~~ cent were tenants. In order to obtain as wide a sample as possible, I did not request these families to give data on all of the ricefields they cultivated, but obtained figures for just one paddy. Therefore, some owners may have been also cultivating paddies as tenants. Three of the tenants in Caticugan were farming paddies owned by either a wife's brother or mother; another worked a paddy owned by a mother's brother. In Sandolot-Datag three tenants had as landlords a sister's husband, father's brother, and a third cousin, respectively.[35] [602]

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[35] A recent survey of thirteen barrios states that 31 per cent of the landlords of tenants were related by blood or marriage to their renters. Rivera and McMillan, op. cit., p. 43.

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In Caticugan, Sandolot and Datag, the average share of harvesters was 10 per cent of the total rice harvest. This is smaller than the share harvesters receive on upland rice caingins, which is usually 25 per cent of the total harvest. However, harvesting caingins is harder work and fewer laborers go to these fields than to the more conveniently located, easier-to-harvest lowland paddies. Actually, this percentage would be slightly higher if the few paddies harvested without helpers had been eliminated from this survey. In Caticugan, four paddies were harvested without outside help. As noted previously, most harvesters, as one farmer said, "take pity" on people with very small paddies or harvests that have been decreased by pests or inclimate weather.

CORN

Introduction

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Siaton is a part of the larger Southern Corn-Coconut region of Negros where corn is the dominant crop. Corn meal is usually eaten three times a day. In 1952, 3,196 acres of corn were planted in Siaton municipality producing an average yield of 11 bushels. In the same year 20,344 acres of corn were planted in the seven southern municipalities of Negros Oriental (Valencia to Tolong) with an average yield of 8 bushels. Since the

end of the last war Negros Oriental has imported about 40 per cent of the corn consumed from Mindanao.[35] 243 311

Barrio Caticugan is unique in Siaton municipality since sections of corn land and paddies can be irrigated. Some barriofolk grow one, and often two, crops of corn in their paddies before the latter are transplanted. Land devoted to irrigated corn in Barrio Caticugan and the division between the fields planted both with rice and corn and solely corn are shown in Plate XXIII.[1] This limit is imposed by the land's elevation that makes gravity flow irrigation impossible farther east.

Barrio Caticugan's canals were built originally not as an irrigation system but to drain the boggy land so it could be farmed. In fact, the land west of the main path of Barrio Caticugan was so boggy that no corn was planted here until forty or fifty years ago. Many old residents of Barrio Caticugan remember when only rice was raised in the barrio. The canals were said to have been much deeper in the past; now they are only several feet deep. In some parts of Barrio Caticugan, such as the northwestern end, the canals are silting up and the land is becoming increasingly boggy. For this 243 312

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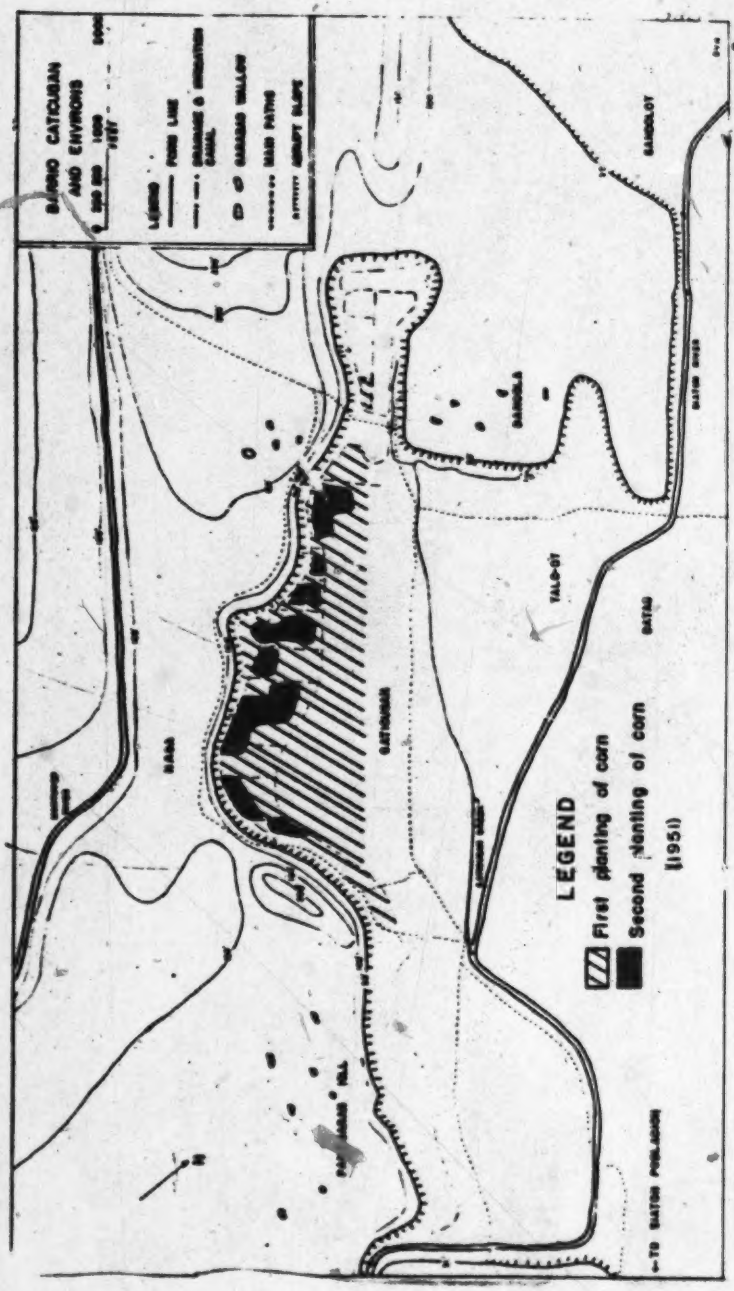
35 "Production Date by Municipalities: Crop Year from July 1, 1952 to June 30, 1953." Provincial Agricultural Office, Dumaguete, Negros Oriental, 1953. Typescript. Vide "Oriental Negros Expects Corn Increase," Philippines Free Press, XLIII, No. 30 (July 26, 1952), p. 22. This unsigned article stated that in 1952 the Department of Agriculture and Natural Resources estimated that only 17 per cent of the corn consumed in the province would be imported from Mindanao. An expected 23 per cent increase in the corn harvests because of increased use of fertilizers was anticipated.

1 [See p. 325, cat. 243 or 311 -- Analyst]


LAND USE (IRRIGATED CORN)
LEGEND
First planting of corn
Second planting of corn
(1951)
PLATE XXXII
BARRIO CATUIGAN AND ENVIRONS
CATUIGAN
TALO-OT
BATAD
BANGOLOY
BANGELA
TO BATAD POBLACION

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3/2

p. 325

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reason little corn is planted here and that which is sowed does not grow well.

There are no cooperative efforts to maintain the canals. Each farmer cares for the canals which run by or through his paddy. The distribution of the water is done without rancor because there is sufficient water for all. During my residence some older men in Barrio Caticugan talked about digging a new canal to irrigate more land. The owner of the spring that the proposed canal was to tap, however, requested ten gantas of shelled corn annually from every farmer through whose field the canal would pass. This price was considered excessive and the canal project was dropped. There was also talk about purchasing a second-hand pump to bring water from the Siaton River to Barrio Caticugan's fields. The largest landowner in Barrio Caticugan had the capital to purchase the pump but the project had not passed the discussion stage in 1953.[36]

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By irrigating some of their paddies the barriofolk can plant corn without waiting for the southwest monsoon. In 1951 the first irrigated paddy corn in Caticugan was planted in March, continuing into April. The sowing occurred immediately after the rice harvest so these

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[36]In 1952 the Mutual Security Agency allocated three million dollars for the purchase of irrigation pumps in the Philippines. James A. Storer, "Philippine Economic Progress," Far Eastern Survey, XXII, No. 8, (July, 1953) pp. 91-2. Ortigas states that both the Canaway and Sacsac rivers in Siaton were under consideration as possible irrigation sources. Ortigas, op. cit., p. 140.

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paddies did not lie fallow. Paddy corn, in 1951, was harvested from May to July and some farmers then planted a second paddy corn crop. This second planting is a gamble for if the precipitation is excessive the paddies flood and the corn dies. Frequently the second corn planting is a complete failure for this reason; however, in 1951 some farmers had a small harvest from their second corn crop. Some paddies never lie fallow and produce two crops of corn and one of rice in a year.

Preparation of Paddies for Planting Corn

The paddies are prepared for the first irrigated corn planting with the removal of the straw (ohot) and stubble from the last rice harvest. Sometimes the paddies are burned before they are flooded. The farmers state that unless the rice stubble is removed it is difficult to plow the land.

After the paddies are cleared they are flooded. An opening is made in a canal and the water flows from paddy to paddy. Sometimes a canal is dammed to raise the water to the same level as the field to be irrigated. Since the amount of water that flows in the canals is small it takes considerable time to irrigate the paddies. One farmer said it took him about two weeks to flood his one-acre paddy. Most of the fields are flooded for three to seven days before they are plowed; the time it takes to irrigate a field depends on its size and location with respect to the canals.

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After the paddies are flooded, they are permitted to dry for one or two days. Any standing water is drained for the farmers state if the paddies are sowed when flooded a beetle (gusawikan) eats the seed corn. The first plowing of the paddies, bongkag, is followed by their harrowing. The second plowing, okay, is done in the opposite direction the field was first plowed. The paddy is again harrowed. The third and final plowing, todling, makes the furrows in which the seed corn is planted. The furrows are about 2 feet apart. Furrows are made closer together than in the regular non-irrigated cornfields because the corn stalks do not grow so large in the paddies.

In some of the paddies which have a very clayey soil the land is not plowed and harrowed before the seed corn is planted. Furrows are made only where corn is to be planted; the rest of the paddy remains uncultivated. In Dolog the pay for a day's plowing is one basket of unhusked corn or three gantas of seed corn, specially selected for planting. [465]

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The Philippine plow is a rather crude implement made entirely of wood except for the iron share--the so-called "square" type with a horizontal foot, curved handle, short sheath, strongly curved beam, and single mould board. (See Plate XXIV.)[1] Both Jagor and Kroeber suggest that the Philippine plow is of Spanish origin. However, the same plow type is found in Java, Bali, and the Celebes as well as in China and Japan while there is

[1 See p 329 cat. 4/2 or 116 -- Analyst]

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The harrow (pakalas) is a simple but cleverly made bamboo implement. (See Plate XXV.)[1] A number of short bamboo poles (go-od) are joined together by two sticks (tohog). The go-od are cut so the branches growing from them become the harrow's teeth (saosao). When the paddies are harrowed the farmer may stand on the harrow or weight it down with large clods and stones.

Corn Planting and Associated Practices

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Methods of selecting seed corn (tingag) in Caticugan are quite backward. Instead of selecting corn ears from hills having strong vigorous stalks with a greater number of ears than other plants, neither broken, leaning, nor weak, the barriofolk select their seed corn from their household store. "Selection [of seed corn] can never be done effectively in a pile of corn ears or grains."[39] Various criteria, however, are used by the barriofolk in selecting seed corn. Large, healthy-appearing ears that have not been eaten by the weevil (bokbok) are chosen. The "eye" (the end of the kernel embedded in the cob) of the grain is examined. If the "eye" is black the kernel is not used for planting; kernels with "glittery" tops are considered good seed corn. Usually the kernels are taken from the middle portion of the cob only. If corn is to be planted in soil that is not considered sufficiently moist the seed may be soaked first overnight. However, this is not a common practice.

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[39]Uichanco and Sacay, op. cit., I, pp. 120-3.

1[See p. 332, cat. 412 -- Analyst]

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The most common corn variety planted in Caticugan's fields is Bisaya, also called Pakilab ("glittery") and Tinigwib. The provincial agriculture office classifies Bisaya corn as Cebu White Flint which was found in 1939 to be the second heaviest yielder in all seasons in the Philippines.[40] Some farmers in Datag, Sandolot and Casala-an plant a variety called Bagsiao in their lowland fields.[41] A few farmers plant Talariray and Kalipos, possibly additional names for Bisaya. Kalipos is said "to be like Bisaya but not pure" so it is probably a local strain.

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Planting the seed corn is largely a woman's job. Usually the men are plowing the furrows while the women and children follow behind to plant the seed corn. Planting of corn is a tiresome task but not backbreaking like transplanting rice seedlings. However, this factor is secondary in explaining why the women do the planting. There is no feeling among the men that planting corn is a "woman's job." In fact when asked the men will reply "Oh, everyone plants corn." But this is not entirely correct. A record was kept of individuals and their sex who planted corn in Caticugan over a period of several weeks. These figures are given in Table XVII.[1]

[183]

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[40] Uichanco and Sacay, op. cit., I, p. 113.

[41] The barriofolk said no Bagsiao was planted in Caticugan because it took longer to mature and did not stand the heat as well as Bisaya.

1 [See p. 334, cat. 243 or 462 -- Analyst]

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TABLE XVII

Division of Labor by Sex

In Planting Corn in Caticugan, 1951

Planters	Number
Women	67
Girls	15
Boys	10
Men	9

More than 80 per cent of the corn planters observed in Caticugan for this 2-week period were females.

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Planting corn is done with the feet. The planters walk down the furrow carrying seed corn in a coconut shell, bamboo container or straw hat. With bare feet they push away the larger clods and make a shallow depression inside the furrow. Four or five seeds are dropped in each hill. The seeds are then covered and the hill firmly pressed with the feet; the hands are never used. Since hills are planted one step apart, the distance between hills depends upon the pace of the planter. Sometimes, but not commonly, the field may be plowed in a grid pattern and the seed corn planted at the points where the furrows intersect.

There are lihis associated with the planting of corn. Many barriofolk prefer to plant their corn when the tide is high and during yayong--when the full moon rises immediately after sunset. Few people plant or work in their fields or paddies on Sunday for religious reasons.

The lihis for planting corn, like those for rice, are not rigidly structured. There are certain items that

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the people usually include, like malapgos and tubli, and other items that may or may not be used depending on the individual. This is true for most of the agricultural lihis. The variations that occur around the "lihi core" makes it difficult to describe them fully. Normally the women perform the corn planting lihi, probably because the men are disinterested and busy plowing the furrows for the women to plant.

The most common planting corn lihi is to bury certain plants or items in the first or the first three corn hills covered. Corn blessed during Holy Week is often planted for many barriofolk believe this seed is protected from insect damage. Malapgos, tubli and tanlad are widely [824] used and for the same purposes as in the rice lihi. Some bury the malapgos with the seed while others stick a twig in a hill. One informant reported he used malapgos so the corn would not wilt in hot weather and so the stalks would have many ears "like the malapgos berries." Malapgos grows along the river banks and the leaves are always a crisp bright green during the hottest part of the weather.

Some items used in the corn lihi are not employed in the rice planting lihi. The leaves of the tuba bush [824] (Jatropha curcas Linn.) which have a pungent odor, are sometimes included to protect the corn from insects. Tuba bushes are never to be attacked by insects, the barriofolk explain, because of their strong, almost disagreeable, odor. Charcoal is used for the people say it makes the corn "nice to see" or "the leaves dark green and not yellow."

The connection is that charcoal is a dark color and if the corn leaves are dark green the plant will be healthy and produce large ears. 243

As one progresses up the Siaton River valley tubli becomes less plentiful until it almost disappears. Its scarcity may be due to the wider use of the plant as a fish poison by this people. Since tubli is often unavailable in the northern barrios of the valley, the leaves of the suwa (Citrus grandis Osbeck), a citrus tree with strong-odored leaves, are substituted along with the shells of a fresh-water snail, ungka (Clithon bicolor Recluz). These two items are never used in Caticugan. Some barriofolk state that suwa and bendita protect the corn from damage by lightning. 824 243

Many, but not all, of the barriofolk of Caticugan bury their lihi items on the east side of the field. One informant explained that if the furrows run east-west, the lihi is made on the east; if the furrows run north-south, the southern side is selected. No one could explain why the east or south sides were considered the proper place to make the lihi. When questioned, they usually replied: "Because this is the way the gulang [old people] did it." Local folklore in southern Negros, however, contains references to the advisability of facing dwellings toward the rising of the sun. This may have been the original reason for the selection of the eastern part of the field for the lihi. [823]

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An old male informant from Tanjay poblacion said here many people put charcoal from the stove, red pepper and kalamongay leaves in the first three corn hills. This mixture is placed in the hills with closed eyes while the three hills are covered with a coconut shell. Such a lihi prevents stray chickens from finding the hills and scratching for the seeds. Charcoal and red peppers prevent insects from eating the seed corn while kalamongay makes the corn easy to husk. Kalamongay is a small tree whose leaves are eaten as greens, and easily stripped from their branches. While some items of the Tanjay lihi are different, the same principle of imitative magic exists.

Caring for the Corn Fields

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Sometimes new fences are built before the corn fields are planted; however, it is difficult to push the sharpened poles into the ground before the rains. For this reason most of the people wait until after the planting to repair or build new fences. The old fences are repaired by adding newly split bamboos that are tied to the bamboo posts with rattan or sig-id. Building a new fence is time-consuming; the materials must be obtained from the hills and brought back to the barrio. Each year the people must travel farther to get rattan and sig-id.

The construction of fences depends on the risk of animals getting into the planted fields. Fields located along the base of Barrio Caticugan's bluff are invariably

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fenced for loose carabaos are pastured above. Fields close to the barrio's main path, however, are often unfenced for people can watch these fields from their residences.

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When the fields lie fallow, pigs usually forage at will in the barrio. Once the corn is planted the pigs are tied or penned. Normally the pigs are tied by a hind leg to a post under the raised floor of the house; this means increased work, for food must now be brought to the animals. Chickens remain loose but efforts are made to keep them from scratching in the newly planted fields.

In Caticugan wild pigs menace agriculture only in Upper Naga. At night they come from the hills across the Mantuyop River and often do considerable damage. The destruction of crops by wild pigs and monkeys (there are none in the vicinity of Caticugan) increases as one travels up the Siaton River valley.

Carabaos often damage crops in Caticugan. Several farmers lost most of their corn crop in 1951 due to destruction by loose carabaos. Once a small herd of wandering carabaos was caught in a newly-planted paddy in Barrio Caticugan. The paddy owners drove the herd to the poblacion where they were put in the public corral. The owners had to pay a fifty-cent fine for each animal in order to obtain their release. If the carabaos are not branded, as is often the case, another fifty-cent fee is charged for recording the brand at the municipio.

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Birds, particularly crows (owak) and the rice bird (mava) often eat the maturing corn. Small nooses (la-ang) may be placed in young corn and rice fields. While these nooses are not actually traps but merely appear to be so they are said to frighten the "clever crows." A series of a dozen small nooses are also tied to a rope that is suspended between two poles in the fields.

Locust (lukton) are sometimes serious pests in the Siaton River valley. Two types of bamboo poles are used to frighten them away with rattling noises. A 6- or 7-foot bamboo pole is cut and the top crushed so it makes a loud noise when shaken. This type of pole is called a kasakasa. A second type, known as palakpak, is made by cutting slits between the two top internodes of a bamboo and it produces the same rattling noise as the kasakasa. (See Plate XXVI.)1

During the post-war years no locusts have visited Siaton. The last recorded invasion was in 1937; in Dolog the farmers are said to have killed 300 cavans of locusts. Trenches about 60 feet long, 3 feet wide, and 5 feet deep, were dug; the locusts were driven into them and covered with earth. This method of killing locusts is called gahong.

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Lucas Ege's grandson told me once the Negritos came to the barrio to barter charms to protect the corn fields from the locusts.[42] They brought small bottles ("there

[42]Sometimes the barriofolk mentioned Negritos who once visited their community. Whether these people were true Negritos I do not know. It is quite possible that they were a Negrito-appearing people whom the barriofolk classified as Negritos.

1[See p. 340, cat. 243 or 116--Analyst]

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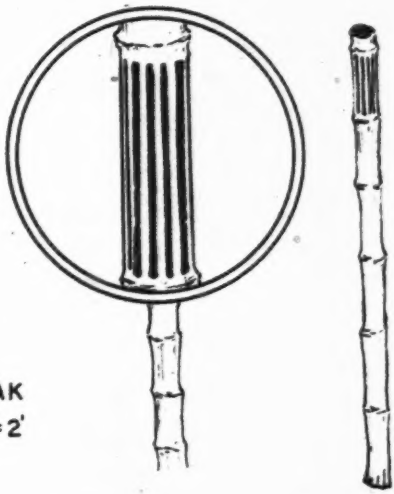
were plenty of bottles then because the Chinese stores sold much wine") containing roots known only to the Negritos. The bottle was taken by the purchaser who walked around his field once, burying it in the center. "Even if the locust came to the field they would not eat the corn." After the harvest the bottle was uncovered and used again. However if the bottle was brought inside the

PLATE XXVI



PALAKPAK
scale: 1" = 2'

house, the roots were said to turn into sigbins, mythical kangaroo-like animals of local folklore. This informant's mother once bartered a blanket for such a bottle with a visiting Negrito. His father was furious when he learned of the barter and made his wife return the bottle. None of the barriofolk have such bottles today for their contacts with the Negritos have ceased.

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A green worm (tohob) often attacks young corn and is said to cause the leaves to turn yellow. One charm (sumpe) against this particular worm is to stick a few branches of the thorny bagakay bamboo in the field. Magahats also put bagakay bamboo in their rice fields to frighten away the maya birds.[43]

Several weeks after the corn is sowed, hills that did not germinate are replanted (pona). Replanting is done in the same manner corn is planted in the saingins; a dibble stick is used to make a hole into which new seed is dropped. This is usually a woman's job. [462]

When the corn is five or six inches high the fields are usually plowed for weed control. The first plowing for weeds is called abre binagsa (a corruption of abrir (Sp.) "to open or uncover" and binagsa (Ceb.) "first"). Plowing is done in a criss-cross manner between the hills or rows of corn. About a month later, when the corn is nearly head tall, the fields may be replowed, known as abre tagorha. Sometimes this is done like the first plowing; or two furrows may be made between the rows, throwing soil over the corn stalks' roots. While nearly all farmers plow their fields once, the second plowing is often omitted if the fields are not weedy. A few farmers make no attempt at weed control. One field in Talo-ot had weeds higher than the mature corn but this was exceptional.

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[43] Oracion, op. cit., p. 54.

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Corn planting in the paddies overlaps the preparation of non-irrigated corn fields for the first crop. The preparation of the latter type of fields in Barrio Caticugan, between the rice-corn division and the main path, is done later than in neighboring barrios. Soils are quite clayey and the fields cannot be plowed until the ground has been thoroughly soaked. In the sandy loam fields of Talo-ot and Datag, however, this difficulty is not encountered.

Non-irrigated corn fields are prepared like paddies planted with corn with two exceptions: (1) the corn fields are not irrigated and (2) rarely harrowed. Some farmers reported weedy non-irrigated fields were harrowed but this was not observed; the paddies are harrowed only to remove the rice stubble. The methods of plowing and planting, and the lihis are the same for the non-irrigated fields as for the paddies planted with corn.

THE DULOT

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Chapter I stated a special study was made to gather comparative data on certain aspects of culture change among the people living in the Siaton River valley. After the first exploratory trip to Apoloy I became interested in the variations of the dulot as practiced in these barrios and Caticugan. The dulot, a pre-harvest corn ceremony, embraces some of the more basic concepts of the barriofolk. The study of the dulot also samples culture change in the Siaton River valley and, in particular,

Caticugan. This section will first describe the dulot and then explain the distribution and variations of the ceremony in the different barrios in comparison with Caticugan. 243 178

The dulot is held before the corn is harvested in either caingins or lowland fields. There appear to be three major purposes for holding the dulot. First, it is an act of recognition of unseen spirits who, if not properly honored, can make the cultivators ill. Second, the dulot is an act of respect and honor to the kalags (souls) of previous owners of the field. Since land is seldom sold in the lowlands these souls normally are the parents of the cultivators.[44] The dulot is "like rent for the land" or a "payment" to the souls of former owners. A widespread belief is that these souls, if angered, can make the field workers sick; fever and stomach troubles are the most frequent afflictions caused by the angry spirits or unhonored souls. Third, the dulot is a premicias sa baul ("Thanksgiving for the field," i.e., for the harvest) to God. 243 [425] [753]

The dulot is an obvious blend of paganism and Catholicism. Animism and reverence for the souls of the dead are pre-Spanish beliefs. Catholicism certainly reinforced the honoring of the dead; this may have been one reason why Catholicism was disseminated so easily in the 243 177

[44] In the caingins the offering is made to the souls of one's departed parents.

Philippines. The concept of gratitude to God for an abundant harvest is a Catholic addition, even though this gratitude is also tendered to the spirits. 243 178

Cases of illness and a few deaths allegedly caused by these spirits or souls because a dulot was not held were reported. One incident affords an example. A resident of Barrio Caticugan became so ill he was unable to eat or sleep for three nights. This sickness occurred the day after a drinking bout in another barrio. Friends first brought him a wine called "Siok Pong" sold in the poblacion Chinese stores, and said to have medicinal qualities. Sick man could not drink the wine and his illness became worse. 243 753 [757]

He tried to think what could be causing his sickness; his heavy drinking was not considered as a possible factor. Finally, a mananabal (local herbalist, often called "quack doctor" in the poblacion) was called to question the patient. It was finally decided that his illness was due to failure to hold a dulot before harvesting his corn. An ancillary cause was thought the jokes he had told near a swampy place, unintentionally antagonizing the spirits that inhabited this locality.

The sick man contended it was unnecessary for him to hold a dulot for he was only a tenant; the dulot was the responsibility of the field's owner. The mananabal said this was not correct, the dulot was the responsibility of the person working the field, even if he were only the tenant. The patient promised to hold a dulot and it is reported his condition improved immediately. 243 755

Not everyone practices the dulot in Catiegan or in 243
the other barrios in the Siaton River valley. Some in- 184
formants reported that the present owners or tenants of a 183
field are not required to hold a dulot if the previous cultivators did not practice this custom. These individuals held no dulot because their "elders did not" or "our field is not accustomed to it." Most barriofolk, however, explained that once a dulot is held, they and future cultivators (be they tenants or owners) are obligated to continue the practice--the ideal but not the actual practice.

Explaining the dulot as a pre-harvest ceremony is 243
incomplete. Many barriofolk believe fresh corn should not 784
be sold or given to friends until the dulot is held. It is possible, however, for the cultivator and his family to eat fresh corn at home, and to serve guests, prior to the dulot. While traveling among the barrios along the Siaton River my assistant sometimes requested fresh corn from his friends. Several times he was refused because the dulot had not been held. Once, however, he was given fresh corn by a relative before his dulot had been performed.

The dulot ceremony is a food offering in the corn 243
field, although some say it may be held in the house. 782
What often happens is that the offering is made to the spirits in the field and a religious ceremony follows at the family altar for the deceased. This was done during one dulot I observed. The dulot is always held at night; the food is placed on a table in the field as for the

loto. After the field offering, the food is taken to the house and eaten. One informant said they buried their food offering in the field after the dulot, but this is rarely done. 243 782

A person noted for skill in holding dulots may be requested to officiate, although the owner or tenant can hold his own dulot if so desired. An old bachelor in Dangola was frequently requested to officiate at dulots in Caticugan; another recognized expert was said to live in Sandolot. In Naga one dulot was held by brothers and sisters whose fields adjoined. However, in Barrio Caticugan such cooperative dulots were uncommon. 243 791

Certain standard offerings are made in nearly every dulot. These basic items include: (1) seven binaluksan (rice wrapped in coconut leaves and then boiled, (2) one boiled chicken egg (usually but not always shelled), (3) one roasted chicken, (4) seven boiled ears of young corn, (5) seven tilads (tobacco leaves, areca nut, lime, and betel leaves), (6) seven tostos (homemade cigars), (7) seven tigols (homemade cigarettes), (8) seven kinalopis (grated fresh corn wrapped in husks and then boiled), and (9) tuba, usually four cups but sometimes one, two, or seven cups. Other items may be used such as seven nilunan (cakes made from finely ground cornmeal) seven cups of roasted cornmeal "coffee", and incense of the dried sap of the kamanan tree. 243 801

Seven is often a magical number among Caticugan barriofolk. Describing the superstitions of the people of Negros, Echauz wrote: "The number seven comes into all his 243 777 801

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undertakings and ceremonies..."[45] The offerings made by the Magahats in their rice and corn caingins include food items in sevens. Oracion reports: "Seven is normally the lowest number for the above items [i.e., in the Magahat's harvest food offering]. These items, however, can be increased to fourteen, twenty-eight, and fifty-six."[46] The Magahats offerings include many items used in the loto and dulot of the Siaton River valley barriofolk.

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One dulot in Sitio Lamtoc, Casala-an, will be described in some detail since it appears to have been typical. I arrived at Pas' house in the late afternoon. Pas, a widow with several grown sons living at home, was holding a dulot that evening. She was busy in the kitchen with the help of three female neighbors husking fresh corn to be used to make kinalopis. Large clay pots filled with kinalopis boiled on the fire for she expected a large crowd to come that evening. Her visitors were to be offered kinalopis to eat and to take home. She was hopeful that a dance might be held if a sufficient number of young people came, some with their guitars.

Around 8 p.m., a Lamtoc resident arrived who had been requested to hold the dulot. At first it seemed that the dulot might be postponed because the sons were unable to obtain the tuba which Pas said was "the most important item." Guhang, a similar alcoholic drink made from the

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[45]Echauz, op. cit., p. 143.

[46]Oracion, op. cit., p. 59.

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buri palm, could not be substituted for tuba. A small table was taken from the house and put in the cornfield when one son returned with the tuba. The table was only 20 feet from the house which was almost surrounded by the cornfield. Pas, her sons, and a few guests, including myself, sat on the porch and watched the offering.

The food offering was identical with the basic requirements previously listed. In place of the seven ears of boiled corn, however, seven husked and seven unhusked roasted corn ears were substituted. Four cups of tuba were set at each corner of the table that had been covered with green banana leaves. One shelled boiled egg was put between the legs of the roasted chicken placed in the table's center. Other items were neatly arranged on the table by the man to conduct the dulot.

The ritualist first "bathed" the food offering with the smoky incense of kamanan sap which was burned in a coconut shell containing live coals. Then the incense container was put on the ground under the table. The man walked away from the table among the rows of corn and softly mumbled an incantation to the spirits. We could not hear him. Later he said he had invited the spirits living in nearby creeks, big trees, stones, the river and glens to come to feast on the food. He told them if they were thirsty to drink the tuba; if they were hungry to eat the roast chicken; if they wished to smoke to help themselves to the cigars and cigarettes on the table. However, he invited no souls to partake in the offering.

The ritualist shortly returned, and one of Pas' sons also went to the table and drank a sip of tuba. If there had been more tuba the son would have emptied the cup and then refilled it. Since only a small amount of tuba was available, he took but a swallow. The ritualist refilled the cup and again walked into the corn rows to mutter his incantations. 243

During the dulot Pas' sons and their male companions snickered and quietly laughed among themselves. Pas and her female companions were quiet but appeared slightly bored. Although the writer's presence may have been a disturbing element, he knew the family well. The participants acted as they would at a social gathering; certainly they showed neither religious awe nor fear. The man performing the dulot was quite serious in mien, but gave no indication of annoyance at the attitude of the young people. 771 781 243

When the offering was finished the table and food were carried inside the house. A rosary then was held by the women for the souls of previous owners of the cornfield. When the rosary was finished a large pot of boiled corn ears and kinalopis were placed on the floor under the center joint of the roof. The pot was surrounded by four plates of boiled fresh-water shrimp. Two girls and one of sons lifted the pot three times; a little food was thrown upward and some was pushed through the floor slats, as a symbolic offering to the souls of Pas' departed parents. 243 [177]

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The group performed this ceremony with much amusement. Then all the guests were served a meal, including food prepared for the dulot offering.

More visitors came later, although not as many as were expected. Pas said this was because six other dulots were being held in Lamtoc the same night! The visitors were given kinalopis to take home; the man who conducted the dulot received an additional gift of food.

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The spatial distribution of the dulot in Caticugan is quite interesting. The dulot is practiced in Talo-ot, by most of the people who cultivate fields west of the main canal in Barrio Caticugan, and in lower Naga. People living east of the main canal in Barrio Caticugan and in upper Naga generally do not hold a dulot before harvesting corn. While the distribution of the dulot in the upper Siaton River valley is not known in detail, it is far more widely practiced in these barrios than in Caticugan. Lamtoc is a small sitio yet in one night six different families were holding a dulot. This attempt to delimit the dulot areas in Caticugan is only approximate. One woman living in Talo-ot cultivated as a tenant, a field between the main path and Caticugan creek; she held a dulot.

It is difficult to determine why the dulot is not held in upper Naga. Many factors are involved. First, there are only a few fields in this area. Second, more people are giving up the dulot in Caticugan than in the more remote barrios fact to be discussed later. Third,

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it is said if a field abandoned because of overflow of the Siaton River were later reclaimed, it was not necessary to resume the dulot even though "the field was once accustomed to it." This is the attitude of most barriofolk living in the Siaton River valley. Some of the fields in upper Naga are especially vulnerable to floods from the Mantuyop River since the bed is only five to ten feet below the level of the fields. Large boulders and other debris are deposited on the fields when the river floods, so reclaiming the land is difficult. Presumably when the fields were reclaimed the dulot was not resumed.[47]

It is somewhat easier to explain the present spatial distribution of the dulot in Barrio Caticugan. When Lucas Ege first purchased this land, he gave the fields southwest of the present main canal to the farmers who built and maintained a fence at the base of the bluff. This fence was necessary for there were many wild pigs, monkeys, and deer in the hills above. The fence protected he fields of the people living near the hills and those f Ege on the other side of the main canal.

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[47]Part of upper Naga was once planted with rice. However, the cultivation of the land was stopped in the early 930's because it was believed "haunted" by spirits. One armer's three sons and his mother-in-law died of "fever nd headaches" while cultivating the land. Their deaths ere believed to be signs that the spirits who lived there id not wish the land to be farmed. The owner told me hat he was planning to "pray to God" and resume tilling he land, however, he did not farm the land during my resisnce. While the soil of upper Naga is not the best it is p worse than the paddies of Dangola. There is very little ultivation of Pangligiran hill for the same reason.

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Lucas Ege apparently was a very religious and domineering individual. Since he did not practice the dulot he would not permit his relatives or tenants to hold the ceremony for their fields. Ege's grandson, still living in Barrio Caticugan, said Lucas substituted a novena (nine consecutive evenings of prayer) for the dulot. At the novena's conclusion he invited relatives and friends to a feast. This harvest novena was held in honor of St. Isidro who was selected as the patron saint of the barrio in 1951. Since the land southwest of the main canal had been given to the people who built the fence, Ege did not or could not prevent them from holding dulots in their fields. This is probably one reason why dulots are the most common in the southwest part of Barrio Caticugan.

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However, a more careful study of the dulots' distribution in southwest Barrio Caticugan shows a significant correlation with the location of hillside springs. Many of the barriofolk believe that in or near these springs (particularly places of lush vegetation) live creatures called kolisaos and kataos. The kolisao is a lizard-like creature with a human head and long hair while a katao is a dwarf with blonde hair who delights to play in the canals--and this is the place where canals are most numerous.

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If these creatures are disturbed or hurt, they can cause an individual to fall ill or even die; skin diseases, however, seem to be their speciality. Farmers with fields

near the vicinity of these springs always run the danger of unintentionally or accidentally annoying kolisaos and kataos. Dulots held in this locality include invitations to these creatures to partake in the food offering. Kolisaos and kataos are invited to attend dulots only when fields are near their supposed places of habitation. More barriofolk in this part of southwestern Barrio Caticugan practice the dulot than their neighbors whose fields are some distance from the springs. Most likely, therefore, the greater retention of the dulot by farmers with fields near these hillside springs has been due to their beliefs in kolisaos and kataos. 243 184

While the ideal pattern requires that a dulot once started should not be abandoned (excluding the exceptions noted) the actual practice is not the same. The dulot is slowly disappearing in Caticugan. The story of how one family in Naga stopped their dulot illustrates the decline of this custom. The sentences in () are questions I asked during the conversation. 243 178 184

> We [husband speaking] stopped our dulot. I was afraid I might make a mistake. What I did was to promise that every first corn harvest I'll sell a little corn, buy some candles, and light them in the church in honor of my dead parents.
>
> When I abandoned my dulot I went around the field saying: 'I am going to stop the dulot because I am ashamed and because I might make mistakes and because it is hard to get all the things needed. The land next to mine is continuing the dulot. You [the unseen spirits] just go there and eat if you want. They will make many sevens, more than five sevens. [This is a reference to the food offering.]

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(If you were afraid that you would make a mistake in holding the dulot, why did not you have some one do it for you?)

When I had two children [the wife interrupted] a mission came [to the poblacion] and I went to confession. I had a hint from the priest that maybe I was holding superstitious practices. So I thought maybe the priest meant the dulot. I told the priest my in-laws were practicing the dulot. I was advised by the priest to tell my in-laws to stop this superstitious practice. The priest said every year to sell a little of the harvest, buy candles and light them in the church in honor of our dead relatives. So when I came home I told my in-laws. That is why we stopped having the dulot.

That's right [the husband broke in] but it was also difficult to get all the things used in the dulot.

Here are three reasons for stopping the dulot. First, the priest's disapproval of the custom; second, the husband's fear that he might make mistakes during the offering; and third, the difficulty in obtaining the necessary supplies.

Other families in Caticugan have stopped the dulot when they purchased land from an owner who practiced the ceremony. Several cases of this nature were cited and the w owners reported that they had not become ill as many lieved they would. However, if someone had become ill is highly probable that these people would have attrib-ed the sickness to the absence of the dulot and would ve resumed its practice.

In the northern barrios the dulot is a community af-ir while in Caticugan it is a family activity performed in crecy. I was unable to witness a dulot in Caticugan be-use I was not told when they were to be held. Yet I had no ouble participating in a dulot in Lamtoc where I was not

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as well-known. This situation underlines a distinct difference between the dulot as practiced in these two localities.

The people in the northern barrios of the Siaton River valley expect guests to attend their dulots; in fact, there is a certain competition in attracting neighbors to one's dulot. No secrecy is involved. In Caticugan the dulot is a confidential family affair. Neighbors and friends are not invited. Usually they are not told when a dulot is to be held. Often the wife and children of the man holding the dulot do not go to the field or participate in the ceremonies.

Several factors explain the slow disappearance and secrecy of the dulot in Caticugan compared with the more isolated barrios. The changes that have occurred in the dulot reflect similar changes in other aspects of the culture of the barriofolk of Caticugan. The northern barrios continue the older cultural patterns while Caticugan is nearer the battleline of acculturation which is more rapid in the poblacion.

This has been true for several centuries. The Spaniards are more vividly remembered in Caticugan than in Casala-an. The influence of the Catholic and Protestant churches in the poblacion is more effective in Caticugan. It is more convenient for the Caticugan barriofolk to attend services and easier for the church officials to reach their barrio. Occasional missions of the Catholic church, where visiting priests come to marry those who have

been living as common-law couples, to baptize and confess the unbaptized and unconfessed, rarely reach as many people in the more isolated barrios as in Caticugan. At least, in one specific case the mission was partly responsible for abandonment of the dulot by a Naga family.

Children of Caticugan can more readily get a formal education than the children of Casala-an or Apoloy. In these northern communities the parents who wish a complete elementary education for their children must make arrangements to room and board them in the poblacion. For the children of Caticugan school is only a short walk from home. The young people of Caticugan have greater access to newspapers and magazines, to the poblacion reading center, and the radio, than the youngfolk of the northern barrios where illiteracy is prevalent.

The barriofolk, particularly the younger generation, are very sensitive about being called "country hicks" by their more sophisticated poblacion friends. For example, one reason why most young people of Caticugan dislike abaca clothing is that the homewoven material is a symbol of a rustic. To the better educated residents of the poblacion the dulot is a "pagan practice" and most of them have no scruples about ridiculing those who practice it. As a result many of the barriofolk are ashamed of the dulot yet not convinced that it is safe to abandon it. Stories of those who have stopped the dulot without any serious consequences are matched by tales of persons who have fallen ill for the same reason.

Many people of Caticugan continue the corn harvest ceremony of their pre-Spanish ancestors but perform it within the privacy of the family group. I know of families in Caticugan who absolutely denied holding a dulot yet whose neighbors said they did. In the northern barrios there was no embarrassment in discussing the dulot. It was a barrio custom. In Caticugan many barriofolk recognized the dulot as a backward unchristian custom, yet they do not feel entirely secure in discarding it; to discard the dulot means to challenge their beliefs in encantos, kolisaos and katsos. 243 178 184

The decline of the dulot also reflects the growing individualism so noticeable in Caticugan. The group has been losing the firm control once held over the individual. This change is apparent in the role of the family in courting and marriage customs. The old cooperative labor groups have almost disappeared in Caticugan; with increasing population and subdivision of land through inheritance the fields are often so small that volunteer labor activities are less necessary today. It also has become cheaper to pay for help than to furnish workers with meals. Caticugan is *en medias res* of a gradual transition from a bartering to a money economy that stimulates the growth of individualism. 571 178 181 184 [476]

The population of Caticugan has expanded considerably over the years, but the yield of the fields appears to have decreased. The acreage yield of corn in the northern barrios is more than twice as large as in Caticugan. An 184 178 243 433

insight into the once greater abundance of food in Caticugan is given from an offering made during the last part of the Spanish period. This offering included one pig, fifteen or twenty chickens (with white feathers), a basketful each of bingka, bodbod, and puto (all varieties of rice cakes), three plates with ten eggs each, and large quantities of tuba. In the past the ritualist who performed the dulot in Naga often received a basketful of corn for his service; none of the ritualists receives this amount today.

Some individuals who stopped the dulot in Caticugan said they did so because "it is too expensive today." The food offering to the spirits was not as costly as feeding the guests. The dulot described in Lamtoc required much corn to make the cakes, beside the other food served. It is possible that since the corn yield in these northern barrios is nearly twice that of Caticugan the community dulot is less of a burden. One reason given for having only a family dulot in Caticugan is that the expense of guests is eliminated. Dulots held for Caticugan's irrigated corn harvests would attract a large number of people since they would occur during a seasonal period of food shortage.

This detailed discussion of the spatial distribution of the dulot in both Caticugan and the northern barrios of the Siaton River valley illustrates how many factors must be considered in explaining change in one custom. There is no "royal road" to a clear understanding

of why the dulot is more widely practiced in the northern barrios or why more people in some parts of Caticugan continue the custom than their neighbors. The study also shows the value of the historical approach for Lucas Ege's personality is still influential in the dulot's distribution in Barrio Caticugan. Yet such an approach does not explain the total situation for pre-Hispanic beliefs in kolisaos and kataos and culture integration encourage many barriofolk to cling to the dulot.

Other Ceremonies Associated with Corn

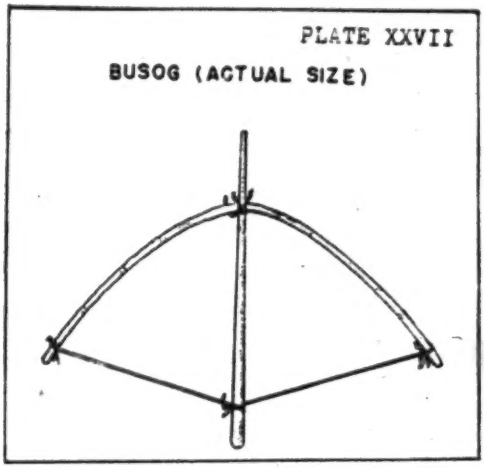
Other practices associated with corn in Caticugan are similar to practices among many primitive people for the magical increase of their food. For example, some of the first fresh corn picked or meal ground from the new harvest is placed in a pot with a sprig of busikad (Kyllinga nonocephala Roltb). A pinch of dirt from an ant mound, a piece of a broken China plate, and three lagit stones the size of the end of one's thumb are also put in the pot. Lagit stones are hard, heavy and smooth, best found in the river shallows where the water runs noisily, and are said to be "alive," reflecting the animism of the pre-Hispanic Filipinos.[48]

Some barriofolk omit the busikad and lagit stones but the pinch of dirt and the broken plate are almost

[48] Boga stones, said to be "dead," are soft, chalky and light.

always used. Water is then added to the pot and the corn or meal is cooked. The pinch of dirt from the mound of an ant and the busikad are said to make the corn easy to grind or the cornmeal to increase when cooked in the future. The broken plate is to make the corn "healthy like a China plate" while the lagit stones are to protect stored corn from the bokbok weevils.

Another similar practice, and for the same purpose, is to put busikad and bila-bila (Eleusine indica (Linn) Gaertn) in the bottom of a pot. A miniature bow and arrow is then added. (See Plate XXVII.) The tiny bow



and arrow are significantly called busog (i.e., "full"). These objects are covered with coconut or banana leaves, cornmeal and water are added, and the pot put on the fire. Bila-bila and busikad are said to increase all

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future cornmeal cooked. Both of these weeds are crawlers that cover the ground with many runners, and busikad is said to have a baking powder-like quality. The bow and arrow are included so one will "always feel full" after eating cornmeal.

The corn harvest lihi is almost identical with the one described for rice. Before the corn harvest (sangui) crosses are put in each corner of the field, although some put only one cross in the center. Several unhusked corn ears are hung on each cross and others add a bit of bendita palm. Prayers are usually repeated; however, some barriofolk said if the person did not know any prayers the mere putting of the crosses sufficed. When the harvest is finished the crosses are collected and taken home for use next year. It was my impression that this lihi was made more casually than the rice lihi.

The Manalabangs

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In Caticugan and other barrios it is nearly impossible to harvest corn or rice without accepting the assistance of the manalabangs or harvesters. This is particularly true of Barrio Caticugan's first paddy corn harvest for it occurs when there is a seasonal food shortage. Basically, the custom of harvesters in this area is a method of forced sharing of food. Some farmers resort to tricks to get their grain harvested without the knowledge of the manalabangs.

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The cultivators do not announce when they plan to harvest their grain. So the harvesters keep a careful watch over paddy corn fields when harvest-time approaches. Some will take siestas or even sleep overnight by a field they believe may be harvested soon. They may wait in a friend's house near the field while the children play outside until the harvest begins.

Most cultivators of cornfields and paddies in Caticugan and environs could easily harvest their crops without the assistance of the manalabangs. Yet they rarely refuse the helpers. When questioned about this matter they often replied "The manalabangs have to live like us" or "They also have intestines." If a cultivator refuses their assistance, the harvesters will comment, "Well, I am going to help you anyway. It is up to you whether you pay me or not." Under the circumstances one can hardly refuse to give the manalabangs a share of the harvest.

While it is not customary to turn away the harvesters, some owners attempt to harvest their corn without having to share the crop. A few begin the harvest at dawn or even on a bright moonlight night. Since most fields can be harvested by a few persons in several hours, the harvest is over before the news reaches the manalabangs. Some helpers do not like dawn harvests, however, because of danger from centipedes or poisonous spiders.

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One man in Barrio Caticugan harvested his first paddy corn crop at dawn to avoid manalabangs. A man

passing the field said he thought sigoins were eating the corn because it was so early in the morning. Some barrio-folk thought this dawn harvest unfair and the owner was said to be "greedy." In two instances fields were harvested Sunday morning when many of the women were attending church in the poblacion; normally no work is done in the fields on Sunday. Another cultivator began to harvest a small cornfield and attracted the manalabangs; then other members of the family harvested a larger field. The small harvest decoyed the manalabangs away from the larger field. 243 476

These harvesters are mostly women and young children. Men rarely harvest corn other than their own crop; they are said to be ashamed or embarrassed to do so. Most manalabangs who harvested corn or rice in Caticugan came from the nearby barrios. Once a harvest begins the news spreads rapidly and the manalabangs scurry toward the field with folded sacks on their heads to carry home their share. A field that could be harvested in several hours by a family may have forty or fifty unrequested harvesters. 243 476 462 857

While the share of the manalabangs varies it is never large. Their share depends upon (1) the size of the field; (2) the amount of corn harvested; (3) the number of harvesters present, and (4) the generosity of the cultivator. Relatives of the cornfield's owner or cultivator usually get more than non-relatives although both groups do the same amount of work. Harvesters who arrive after the harvest is completed may be given a few ears of corn 243 476

for consolation. Manalabangs who have fairly large cornfields are often given free corn even though they offer to purchase it. In the end, however, the giver loses nothing since his "gift" will be returned when the recipient's field is harvested. The manalabang harvest shares range from several ears of corn to as many as twenty ears. 243 476

When the paddy corn is harvested corn prices are at their peak in Siaton poblacion for this is the "starvation period"--the period when many family's last harvest corn supply is running low and the new crop is still immature. The harvesters also try to buy corn from the owner; some women come just to buy or barter fish or tuba for corn. Usually the owners are not eager to sell since most of them will have to buy cornmeal before the next harvest. Yet few refuse to sell or barter some of their harvest, although they often limit the amount a person may buy. To refuse to sell some of their corn harvest would mean some barriofolk would call them "greedy." 243 433 476 435 432

Manalabangs collect a small pile of corn ears they have harvested and sit down with a definite air of possession. This is the corn they insist on buying. In one case the owner refused to sell the manalabangs the amount of corn they had requested. Collecting all the individual corn piles, he resorted them into new piles, eliminating about a third of the corn. He asked fifteen cents for each pile of corn but settled for ten cents after the women bargained. These female manalabangs had already received their share for helping in the harvest; the 243 476 432

owner was definitely annoyed that he had to sell part of his harvest. 243 476 432

The price of corn varied in the harvests. Two handsful of ears for two or three cents, fifteen ears for the same price and a centavo an ear are a few examples of the prices. Relatives are normally sold more corn and at a cheaper price than non-relatives. The other harvesters do not object. One woman gave the mother of her son's girl-friend a basketful of corn to win her favor. 243 476 435
People often eat the corn they harvest on the spot; the husked ears are roasted on hot coals. [264]

Another reason why the harvesters' assistance is normally not refused is the widespread belief in "envious people." "Envious people" can do harm to one's person or crops through magic. If the manalabangs' help were refused one of them might attempt revenge on the cultivator or his crops. Older manalabangs may silently pray as they work that the cultivator may enjoy good health and abundant harvests in coming years. As one woman said, "the manalabangs just wish good for the owner while they work." 243 476

Corn is harvested by pulling the ears from the stalks. Harvested ears are collected in a basket called bukag. Helpers never know what their share will be until the harvest is completed. If the farmer is a tenant the owner is usually present to assist in the division of the harvest. No arguments over the manalabangs' shares were ever witnessed; they may think their share is too small but they do not complain openly. [427]

Corn stalks from the first paddy corn harvest are given to those who cut them. At this time the nearby grazing areas are green and fodder is plentiful. During the harvest or shortly afterwards men or young boys come to cut the stalks and carry them home for their animals. However, in the later corn and rice harvests the cultivators do not donate the harvested stalks. By this time the pastures have begun to dry up; the corn and rice stalks are retained by the owners for their own animals.

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Local Harvest Migrations

During July many people from Caticugan, the poblacion and nearby barrios go to Omanod to help in the corn harvest. Corn is usually harvested earlier in Omanod than in Siaton.[49] Omanod is situated in a small riverine plain in Sta. Catalina municipality, about three or four miles west of Barrio Bonawon. In 1951 people came from Bacong and Dauin to help in the Omanod corn harvest. Some took the bus and others from Siaton poblacion walked or rode horses. Women and young children outnumbered men. Several families in Caticugan and the poblacion left younger children under the care of an elder daughter while mother and father went to Omanod.

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[49] Siaton corn harvests sometimes occur before those of Omanod. Normally, however, the earlier rains of Omanod make it possible for the barriofolk to plant (and harvest) their corn before Siaton. However, in 1952, fewer harvesters went to Omanod from Siaton because both harvests occurred about the same period.

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The second paddy corn is usually planted in June or earlier. Not all of the ricefields are planted with a second corn crop. The year of my residence the second crop was planted before the first non-irrigated corn harvest was finished. If the paddies are planted and harvested late the chance of getting a second crop is smaller; precipitation is more abundant and the paddies flood, killing the corn. If the second corn crop is planted late it will not have time to mature before the rice must be transplanted. Corn that does not mature because of excessive moisture is fed to the animals. [231]

The fact that successfully raising a second corn crop in the paddies is difficult is reflected in the preparation of the land; the ricefields are merely furrowed, not plowed or harrowed, and often the cut stubs of previous corn stalks remain in the paddy. Since the land is not well tilled the second corn crop is usually weedy. Many farmers who planted a second corn crop in 1951 had sufficient time to prepare the land as thoroughly as they did for the first planting, but did not do so. As a result the yield is usually much smaller than the first crop.

Some old people believe it is unwise to handle harvested corn ears roughly. One informant told the story of the poor man who came to the house of a rich farmer who had kicked and thrown his ears of corn around "disrespectfully." The beggar asked for some corn but the rich man said he had none to give. Then the corn ears spoke to the poor man: "Take us with you, poor old man. This

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rich man does not treat us kindly." Very few people in Caticugan knew this story. Possibly, in the past, the barriofolk may have believed corn had a "soul"; among some of the peoples of Southeast Asia (for example, Indo-China) rice is believed to possess a soul.

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The second paddy corn and the first non-irrigated corn harvests usually occur in August and September. Manalabangs do not present such a problem since they are busy in their own fields and there are more crops to harvest. This is a busy period for everyone, particularly the women. They travel to Sandolot, Casala-an and other nearby barrios to obtain corn to replenish inadequate supplies. It is difficult not to think of the statement made by Taft that "the best man in the Philippines is the woman" when one observes the activities of these female harvesters. Their untiring efforts to maintain food for their family make many of them quiet heroes.

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"Wet season" corn is harvested in August and the "dry season" corn, second non-irrigated crop, is normally planted in October. September is the climax month of the rainy season so the farmers wait until October when the monthly precipitation decreases considerably yet the fields are still moist enough to plow and plant. The second non-irrigated corn crop is normally harvested in Caticugan and environs in January or February. Some northern barrios, like Dolog, plant a third corn crop but the acreage is small.

Cornfield Sizes and Yields

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According to Siaton's municipal land records there are 580 acres classified as maizal (cornfields) in Caticugan, owned by 291 different persons. The records list 321 individual fields since some own more than one field; the average size was 1.9 acres. Of the owners of corn land 64 per cent live in Caticugan, 14 per cent in Siaton poblacion, 7 per cent in Sandolot, 5 per cent in Datag and 4 per cent in Mantuyop. The remaining owners live in Dumaguete, Zamboanguita, Maloh, Cabangahan, Omanod and Sta. Catalina poblacion. While 36 per cent of the owners of cornfields do not live in Caticugan, 51 per cent of the owners of paddies live in other communities.[51]

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I made a survey in Caticugan to check the accuracy of the municipal land records and obtain additional data on tenancy. Ownership and tenancy figures obtained through this survey indicate that tenancy is higher for paddy than cornfields. Information gathered from this survey is given in Table XVIII.

TABLE XVIII

Percentages of Ownership and Tenancy of Caticugan's Paddy and Cornfields -- 1951

	Paddies	Cornfields
Owner	50	60
Owner-Tenant	13	27
Tenant	37	13

51 These are approximate figures; field sizes may not be accurately recorded or may be in other sitios of Caticugan, a fact not always noted on the records. However, special care was taken to check as thoroughly as possible the actual residences and not to include fields in other sitios. I am grateful to the municipal treasurer, Ramon Regalado, and the chief clerk of the municipio, for assistance in this matter.

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I also made a survey of harvest yields and field sizes that included 51 acres of land--17 acres in Barrio Caticugan, 11 acres in Talo-ot and 23 acres in Naga. Caticugan's average yield for the first paddy and first non-irrigated crops was 6 bushels of corn per acre. The average size of the cornfields in Caticugan, based on this survey, was 1.2 acres while the average obtained from the land records was 1.9 acres. Several hundred husked cornears were measured from the second non-irrigated harvest of Barrio Caticugan; the average length of the ears was 2-1/2 inches. However, the second harvest from non-irrigated cornfields is usually smaller than the first harvest.

My survey included a small field in Barrio Caticugan where loose carabaos destroyed the crop and four fields in Naga, two in which the crop was damaged by wild pigs and two damaged by insects and floods. Total acreage of these fields was less than 5 acres; they were included in the averages for such incidents are fairly common. The survey's largest cornfield was 4-acre field in Talo-ot while the smallest was .3 of an acre. According to municipal land records the largest field in Caticugan was 27 acres (a field that had been divided among the heirs although the record was not changed) while the smallest field was .1 of an acre.

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In 1939 there were 47,440 farmers in Negros Oriental with 43.9 per cent owners, 12.1 per cent part owners, and 43.7 per cent tenants.[52] According to my surveys,

[52] Yearbook of Philippine Statistics: 1946, p. 138.

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the tenancy for both paddy and cornfield in Caticugan is 55 per cent owner, 20 per cent part owner, and 25 per cent tenant. These figures bear out my opinion and that of other informed observers that in Siaton the tenancy rates are lower than the average for the province.

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I made a similar survey to determine the average yield, field size, and the harvester's share in the Siaton River valley barrios. In Dolog only the two landlords (the present mayor of Siaton and the former deputy governor of the province, both brothers) were interviewed for they own most of the cultivated land. The figures, combined with those of Caticugan, are given in Table XIX.

TABLE XIX

Cornfields: Average Sizes and Yields and Harvesters' Shares in Siaton River Valley - 1951[53]

Community	Average Size Of Fields (Acres)	Average Yield Per Acre (Bushels)	Harvesters Share of Total Harvest (Percentage)
CATICUGAN	1.2	6	15.5
Datag	1.5	7	15.0
Sandolot	1.2	12	15.0
Casala-an	1.2	12	15.3
Dolog	-	20	-

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Table XIX indicates that corn yield per acre increases as one goes up in the Siaton River valley. Yields

[53] The survey included 71 acres in Casala-an, 44 acres in Sandolot and 47 acres in Datag. The two landlords of Dolog gave me information on their fields that totaled 35 acres. Data obtained from Datag, Sandolot and Casala-an were gathered by my assistant who took two days to collect the figures. Obtaining such information is often difficult when the barriofolk are not well acquainted with the field worker. For this reason I felt my assistant, a former school-teacher in Sandolot, well-known and respected by most of the people, could collect the data more accurately.

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in Casala-an and Sandolot are twice those of Caticugan while in Dolog the yield is more than triple. These figures bear out my opinion that cornfields in the north look healthier, the stalks were taller and the number of ears per stalk greater. Of all the growing corn I saw in the Siaton River valley Dolog's fields appeared to be the best. More fertile soils and greater precipitation with less chances of drought periods are some explanatory factors.

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Methods of preparing the land, seed selection, corn varieties, and care of the planted fields do not differ significantly among the barrios. As stated in Chapter II, the annual precipitation in the northern barrios is greater than in Caticugan and Siaton poblacion. In the northern part of the Siaton River valley the soil is rich, well-drained sandy loam. Caticugan's corn often suffers, as in 1951, from lack of rain during the growing season. In 1951 I was sure that the first non-irrigated corn was going to be a near total loss for lack of rain. While this did not occur some fields and parts of other fields had to be replanted because the young corn died.

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A certain standardization of the harvesters' share appears to exist in the Siaton River valley. One might imagine, as I did, that their harvest shares would be larger in the northern barrios where the yield is greater. The manalabangs' share in the rice harvest was only 10 per cent, a reasonable difference since rice is scarcer and of greater value than corn.